UNIVERSITY OF
CHARLESTON LIBRARY
1700006793

MORRIS HARVEY COLLEGE
CHARLESTON, WEST VIRGINIA

ANDREW S. THOMAS
MEMORIAL LIBRARY

CALL NUMBER
301
W21o

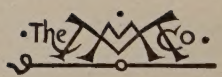
ACCESSION
18214

do not leave

DATE DUE

MAR 5 '66			
MAY 13 '67			
[illegible]			
M. H. C. LIBRARY			
JUL 8 '74			
M. H. C. LIBRARY			
GAYLORD			PRINTED IN U.S.A.

OUTLINES OF SOCIOLOGY


The
Co.

OUTLINES OF SOCIOLOGY

BY

LESTER F. WARD

AUTHOR OF "DYNAMIC SOCIOLOGY," "THE PSYCHIC FACTORS OF CIVILIZATION," ETC.

Withdrawn
Do not return to library.

New York
THE MACMILLAN COMPANY
LONDON: MACMILLAN & CO., LTD.
1923

All rights reserved

18214

Copyright, 1897,
By THE MACMILLAN COMPANY.

Set up and electrotyped January, 1898.

Norwood Press
J. S. Cushing & Co. — Berwick & Smith
Norwood Mass. U.S.A.

301
W210

To

Dr. Albion W. Small

THE FIRST TO DRAW ATTENTION TO THE EDUCATIONAL VALUE OF MY SOCIAL PHILOSOPHY THE STANCH DEFENDER OF MY METHOD IN SOCIOLOGY AND TO WHOM THE PRIOR APPEARANCE OF THESE CHAPTERS IS DUE

THIS WORK IS GRATEFULLY DEDICATED

PREFACE

THIS little work has been mainly the outcome of a course of lectures which I delivered at the School of Sociology of the Hartford Society for Education Extension in 1894 and 1895. They were given merely from notes in six lectures the first of these years, and expanded into twelve lectures the following year in substantially their present form. The *American Journal of Sociology* having been instituted in that year, I was requested to contribute, and one of the twelve lectures appeared in each number from its first issue, that of July, 1895, until its twelfth, that of May, 1897, forming an uninterrupted series.

The general name for this series of papers was "Contributions to Social Philosophy." For the first six of these papers, or one half of the series, this appellation is sufficiently appropriate, since they treat mainly of the relation of sociology to other cognate sciences. Since it has been perceived that science consists in the discovery of truth and not in the accumulation of facts, the distinction between

science and philosophy has become less clear than it was formerly supposed to be. It is certain that the scientific progress of the world has been the result of thought applied to phenomena; and this surely is something very near to philosophy. Professor Robert Flint, in his *History of the Philosophy of History*, says: "No special science is excluded from having the closest connection with and interest in philosophy, so that each special science, and even every special subject, may be naturally said to have its philosophy; the philosophy of a subject as distinguished from its science being the view or theory of the relations of the subject to other subjects and to the known world in general, as distinguished from the view or theory of it as isolated or in itself."[1] Professor George G. Wilson of Brown University, in a paper read before the Social Science Association,[2] adopts this definition of Professor Flint for Social Philosophy, which has at least the merit of once more clearly differentiating philosophy from science, and is to be recommended for all the other sciences. I do not hesitate to apply it to the first part of this work.

For the second part, however, the name social

[1] *Historical Philosophy in France and French Belgium and Switzerland*, 1894, New York, p. 20.

[2] "The Place of Social Philosophy," *Journal of Social Science*, No. XXXII., November, 1894, pp. 139–143.

philosophy is not applicable in the same sense, but only in the older more general sense in which the term philosophy is practically synonymous with science, albeit the science is treated very broadly. I therefore conclude to divide the work into two parts, calling the first Social Philosophy, and the second Social Science.

As regards the general name for the whole work, it seems to be quite correct to designate the whole as *Outlines* of Sociology; the term being used in a very literal sense for the first part, and in the ordinary sense for the second. The primary task has been, as it were, to bound the science — to mark it off from other sciences, hem it in, and clearly differentiate it. The second task has been to sketch it in broad outlines calculated to bring out its true character unobscured by detail. Part I. may be looked upon as the frame and setting of a pen sketch embodied in Part II. Looked at from a somewhat different point of view, the earlier chapters may be regarded as aiming to show what sociology is not, while the later ones have for their object to set forth in broad outlines what sociology is.

It has appeared to me that these two objects are of prime importance in the present state of opinion respecting this science, when so many conflicting views are current as to its true nature and scope. No question is more frequently asked me than how I

would define sociology; and nevertheless I have observed that contemporary works on sociology teem with definitions of the science, many entirely different ones occurring in the same work. Indeed, I am almost the only one who has written on the subject who has not ventured one or more definitions. This has been because it has been apparent to me that it is not definitions that are needed, but clear explanations and definite delimitations of its field. It is these that the present work aims to supply from the standpoint of its author, who would not thereby deny the claims of others who look at the subject from other standpoints.

L. F. W.

WASHINGTON, November 5, 1897.

CONTENTS

PART I

SOCIAL PHILOSOPHY

CHAPTER I

PAGE

THE PLACE OF SOCIOLOGY AMONG THE SCIENCES . 3

CHAPTER II

RELATION OF SOCIOLOGY TO COSMOLOGY . . . 21

CHAPTER III

RELATION OF SOCIOLOGY TO BIOLOGY 43

CHAPTER IV

RELATION OF SOCIOLOGY TO ANTHROPOLOGY . . 64

CHAPTER V

RELATION OF SOCIOLOGY TO PSYCHOLOGY . . . 94

CHAPTER VI

THE DATA OF SOCIOLOGY 116

Part II

SOCIAL SCIENCE

CHAPTER VII

PAGE

The Social Forces 139

CHAPTER VIII

The Mechanics of Society 160

CHAPTER IX

The Purpose of Sociology 191

CHAPTER X

Social Genesis 213

CHAPTER XI

Individual Telesis 234

CHAPTER XII

Collective Telesis 262

INDEX 295

PART I

SOCIAL PHILOSOPHY

CHAPTER I

THE PLACE OF SOCIOLOGY AMONG THE SCIENCES[1]

THE word sociology first appeared in print in its French form "sociologie" in the fourth volume of Auguste Comte's *Positive Philosophy*, the first edition of which was published in 1839. The author's "avertissement" prefixed to that volume is dated December 23, 1838, so that the word must have been penned during the year 1838 or earlier. That edition has long been exhausted and is accessible to few, but in the third edition of 1869, which is perhaps the best known to the public, the word occurs on page 185 of Vol. IV. In a footnote the author says: —

I think I should venture, from this time on, to employ this term, the exact equivalent of my expression social physics already introduced, in order to be able to designate by a single name that complementary part of natural philosophy which relates to the positive study of all the fundamental laws proper to social phenomena. The necessity for such a denomination to correspond to the special aim of this volume will, I hope, excuse here this last exercise of a legitimate right, which I believe I have

[1] *American Journal of Sociology*, Vol. I., No. 1, Chicago, July, 1895, pp. 16–27.

always used with all due circumspection, and without ceasing to feel a strong repugnance to the practice of systematic neologism.

The world is certainly greatly indebted to Comte for this word, as it is also for that other useful word of his, altruism. Words are the tools of thought, and ideas can no more progress without words than can the arts without instruments and machinery. Although the word sociology is derived from both Latin and Greek, still it is fully justified by the absence in the Greek language of the most essential component. While it need not altogether replace the virtually synonymous expression social science, it can be used in many cases where that could not. It tends to give compactness to the general conception and to unify the nomenclature of the sciences. In doing so it also adds somewhat both qualitatively and quantitatively to the thought. We all know what an improvement physics has been upon natural philosophy, and biology [1] upon natural history.

Sociology stands in about the same relation to the old philosophy of history, but any one can see how greatly it modifies and amplifies that conception.

[1] Until Huxley in 1876 went to the bottom of the subject (see Science and Education Essays, London, 1893, p. 268) and showed that the word biology was first employed by Lamarck in a work which appeared in 1801, there was much confusion as to the origin of this word. Comte (*Phil. Pos.* III., 81) ascribed it to de Blainville, and I followed him erroneously. Professor Giddings by a still greater error has recently (*Theory of Sociology*, p. 17) given the credit to Comte.

Another of its marked advantages is that it is a single word and as such has its appropriate derivatives, especially its adjective sociological, which so greatly simplifies expression. When we consider, therefore, that this science, new as it is, has its definite name and several useful synonyms, and that besides the regular adjective sociological it has the shorter one social[1] which conveys a somewhat different idea, we may well regard this most complex field of investigation as even better equipped with the necessary implements of culture than many of the simpler fields. So much for words.

Philosophers of all ages have been at work upon the problem of a logical and natural classification of the sciences. Not to speak of the ancients, we have had systems by Oken, Hegel, d'Alembert, Ampère, Locke, Hobbes, and many others before Comte and Spencer. Each of these systems has been largely a product of the quality of the author's mind and was specially adapted to the general thesis of his philosophy. In selecting from among them all that of Comte as best adapted to the subject of social philosophy I am far from condemning all others or even making odious comparisons. There is always more than one entirely correct way of classifying the

[1] Dr. Albion W. Small has, since the above was written, very properly called attention to the special value of the word societary in discussing social questions. See *Ann. Pol. & Soc. Sci.*, Vol. V., May, 1895, p. 120.

phenomena of any great field. For example, the classification of the sciences which Spencer proposes as a substitute for Comte's, although a good one for certain purposes, is not a substitute for that classification and cannot be devoted to the purpose for which Comte employed it. Spencer's is a formal or logical classification, Comte's a genetic or serial one. The former shows the relations of coexistence among the sciences, the latter those of sequence and natural subordination. Spencer's is essentially a statical presentation of the facts, Comte's a dynamic one. The most important thing to determine was the natural order in which the sciences stand — not how they can be made to stand, but how they must stand, irrespective of the wishes of any one. What is true cannot be made truer. The world may question it and attack it and "hawk at it and tear it," but it will survive. It makes no difference either how humble the source from which the truth may emanate. It is not a question of authority. If it is truth, it may come from a carpenter of Nazareth or from an attic in the Latin Quarter; sooner or later all the world will accept it. One of the most convincing proofs of the truth of Comte's system is found in the fact that Spencer himself, notwithstanding all his efforts to overthrow it, actually adopted it in the arrangement of the sciences in his synthetic philosophy and has never suggested that they should be otherwise arranged.

But any such sweeping classification of the sci-

ences must recognize the necessity of the broadest generalization, and must not attempt to work into the general plan any of the sciences of the lower orders. The generalization must go on until all the strictly coördinate groups of the highest order are found, and then these must be arranged in their true and only natural order. This Comte accomplished by taking as the criterion of the position of each the degree of what he called "positivity," which is simply the degree to which the phenomena can be exactly determined. This, as may be readily seen, is also a measure of their relative complexity, since the exactness of a science is in inverse proportion to its complexity. The degree of exactness or positivity is, moreover, that to which it can be subjected to mathematical demonstration, and therefore mathematics, which is not itself a concrete science, is the general gauge by which the position of every science is to be determined. Generalizing thus, Comte found that there were five great groups of phenomena of equal classificatory value but of successively decreasing positivity. To these he gave the names astronomy, physics, chemistry, biology, and sociology. A glance at these suffices to show that they conform to the conditions outlined and that they must stand in this order. To complain, as some have done, that many well-recognized sciences are not named in this list is totally to misconceive the object of the classification. The conception is a great and grand one, and before it all

captious criticisms must yield if it is to do its proper work. But really, when carefully scanned, nearly every proper science can be assigned its natural place in this scheme. For my own part, I should add one to the number of these great coördinate sciences. I should recognize psychology as such and place it, as Spencer has done, between biology and sociology. Not that Comte ignored it, but in the mighty sweep of his logic he made it a part of biology, calling it "transcendental biology."

Much has been said about the relation of economics to sociology, and some have gone so far as to regard sociology as in some way subordinate to economics. The latter is simply one of those great fields of phenomena which lie outside the lines upon which the classification is based. Not that it is not recognized or appreciated, nor that it does not have its fixed and proper place in the scheme. To illustrate this we can best consider some of the other and less complex of the five great groups. Take astronomy, for example. It might be asked: Where is geology or geography? They do not appear in the series. Are they ignored or omitted? By no means. They simply belong under the broad conception of astronomy. The earth is to the astronomer simply a planet, and as such only does he study it. He may have more to say of Jupiter or Saturn. This illustrates the sweeping character of Comte's generalization. Those who raise these objections do not grasp it in its true magnitude. And

I may say here, parenthetically, that Comte was typical of the French mind in general when at its best. There is no greater error than that of thinking it light and trivial. I have heard mathematicians, astronomers, and physicists say the same for these great departments of science. Every chemist, anatomist, and physiologist must be acquainted with French thought on these subjects. It was Lamarck who really broke the way to the new biology and gave it its name. Political economy, with all its merits and defects, originated with the physiocrats. In the very word altruism Comte laid the foundation of a scientific ethics. And for moral power in fiction what author has approached Victor Hugo? The French mind penetrates to the very heart of every problem it attacks and is not deterred by practical obstacles. It has thus been the great organizer of human thought, leaving the details and frictional hindrances to the German and English schools. France has furnished the warp of science and philosophy, other nations their woof.

What has been said of astronomy and the sciences that fall within its far-reaching scope is also true of the other great groups. It is not necessary to give illustrations in all, but biology furnishes some that are specially instructive. Biology is the science of life, and as such includes all that has life. Its principal branches are therefore vegetal and animal life. Yet biology is neither botany nor zoölogy, nor both combined. These, it is true, fall under it, but only

in the same sense that geology and geography fall under astronomy. And just as the great bulk of geology and geography is not astronomy at all, so the greater part of both botany and zoölogy is not biology at all. This principle holds of all truly logical classification. The lower terms of any system of generalization always contain much more than the next higher. They stand under them, but all that belongs properly to them as lower terms does not belong to the higher terms, but is additional to what is necessary to characterize them. This is well illustrated in both botany and zoölogy as systematic sciences. All classification here as elsewhere is what is called synoptical. In arranging the species of a great natural order they are always divided into first large and then progressively smaller and smaller groups. The order is divided into coördinate families, each family into coördinate genera, and each genus into species which are also coördinate. Usually there are found to be more subdivisions than these, and we have in botany, at least, suborders, subfamilies, tribes, subtribes, and subgenera. Even species have their varieties, and in some sciences, particularly in ornithology, these are called subspecies and have a special significance. What most concerns us here is that in characterizing these successively lower and lower groups, when scientifically done, none of the characters are described in a lower that have already been employed to mark off the next higher group. All the characters of a

family are additional to those of the order to which it belongs, all those of a genus additional to those of its family, and all those of a species additional to those of its genus. In correct synoptical work there is no repetition or mixing up of the characters belonging to these respective groups, so that we speak of ordinal, family, generic, and specific characters.

All this may at first sight seem irrelevant to the question before us, but natural history furnishes the best possible example of the primary process of the mind in reasoning upon concrete facts. There is a certain school of biologists who are somewhat disposed to sneer at the old-fashioned study of systematic botany and zoölogy, but if it had no other claims, it could be defended from the pedagogic standpoint as the best possible discipline of the mind, as the supreme object lesson in logic. It may sound paradoxical to assert that the study of living organisms can be made an aid in grasping the abstruse problems of metaphysics, but it certainly can do this. One of the most difficult of those problems has always been the Platonic idea, and few students ever readily grasp it. Yet every one of these groups in natural history classification to which I have referred is nothing more nor less than a Platonic idea. A species, a genus, a family, an order, a class or a kingdom is this and nothing else, and every schoolgirl who has analyzed a flower has, unknown to herself and without mental effort, obtained a clear conception of what constitutes the Platonic idea.

We come then to the last and highest of the sciences, viz., sociology, and what has been said is calculated to prepare us to understand the true scope of that science. This is specially important because there exists considerable confusion upon this point. The greatest difficulty has been that of distinguishing it from political economy or economics. It has naturally happened that it fell to teachers of that science to take up sociology also and give instructions in that, and from the long recognition of economics as a necessary branch of learning and the recent appearance of sociology upon the scene it has been concluded by some that this young aspirant for a place in the curriculum must necessarily be some subordinate outgrowth of the older science. But from the considerations already set forth it is obvious that this is an erroneous view. Comte's conception is of course widely different, as he makes it one of the great coördinate groups of his so-called hierarchy, and as such to embrace everything that pertains to man as a social being. But before considering this claim let us examine the views of one of the foremost political economists of the world, Mr. John Stuart Mill, and this at a date anterior to the publication of Comte's name or his method. Mill saw that there was a great science of society as yet unnamed and undefined, and in striving after these two ends he used the three expressions: "social economy," "speculative politics," and "the science of politics," and then pro-

ceeded to define the scope of this great science as follows : —

This science stands in the same relation to the social, as anatomy and physiology to the physical body. It shows by what principles of his nature man is induced to enter into a state of society ; how this feature of his position acts upon his interests and feelings, and through them upon his conduct ; how the association tends progressively to become closer, and the coöperation extends itself to more and more purposes ; what those purposes are, and what the varieties of means most generally adopted for furthering them ; what are the various relations which establish themselves among men as the ordinary consequence of the social union ; what those which are different in different states of society ; and what are the effects of each upon the conduct and character of man.[1]

Not content with thus broadly outlining a science to which he would have undoubtedly applied the name sociology if Comte or any one else had at that date suggested it, he proceeds to show how this science differs from that of political economy, and in these terms : —

"Political Economy" is not the science of speculative politics, but a branch of that science. It does not treat of the whole of man's nature as modified by the social

[1] J. S. Mill, "On the definition of Political Economy ; and on the Method of Philosophical Investigation in that Science," *London and Westminster Review*, Vol. XXVI., October, 1836, p. 11. Reprinted with slight modifications as the fifth of his *Essays on Some Unsettled Questions of Political Economy*, 1844, p. 135.

state, nor of the whole conduct of man in society. It is concerned with him solely as a being who desires to possess wealth, and who is capable of judging of the comparative efficacy of means of obtaining that end. It predicts only such of the phenomena of the social state as take place in consequence of the pursuit of wealth. It makes entire abstraction of every other human passion or motive except those which may be regarded as perpetually antagonizing principles to the desire of wealth, namely, aversion to labor, and desire of the present enjoyment of costly indulgences. . . . Political Economy considers mankind as occupied solely in acquiring and consuming wealth; and aims at showing what is the course of action into which mankind, living in a state of society, would be impelled, if that motive, except in the degree in which it is checked by the two perpetual counter motives above adverted to, were absolute ruler of their actions.[1]

Although it is the old abstract political economy which is here described, and although the modern economics is much broader in its scope and rests to a far greater extent upon the observed facts of human life and action, still it remains true that the two sciences here so clearly marked off from each other by Mill are distinguished in substantially the way he shows them to be. The distinction is not essentially different from that between biology as now universally understood and taught and botany or zoölogy. It is a distinction of position in a scheme of classification. Rigidly construed, while

[1] Mill, *loc. cit.*, p. 12.

the whole of the latter falls under the former, nothing that is distinctively botanical or zoölogical should be called biology. And in the same way, while economics belongs within the great field of sociology, there should be no confusion or overlapping in speaking of these sciences or in teaching them, so that nothing that clearly belongs to economics should be treated as sociology. While in so complex a field of phenomena it may be difficult in practice to draw the distinction thus definitely and always maintain it, this should be the constant aim and ideal both of the teacher and the social philosopher. If this is done, there will be no such thing possible as a conflict between them, or of the cultivators of one of these sciences encroaching upon the domain of the other. In some of the simpler sciences this complete separation of the superior from the subordinate fields is less difficult. In astronomy, for example, it is easy. Who ever heard of a geologist complaining that the astronomers were encroaching upon his domain? With the degree of complexity, however, the clearness of these distinctions diminishes in the maze of special details, until when the field of social action is reached it requires a skilled pilot to keep the thought-laden craft safely within the true channel of logical consistency. Yet the course exists as definitely in the one case as in the other, and it must be found and followed before the present confusion can be cleared up. It has been my purpose thus far simply to indicate that

course and to show what I conceive the science of sociology to be as distinguished from all those special sciences which, indeed, fall within its general purview, but which are entitled to be cultivated, and have been cultivated, as sciences. I have taken economics as an example because it seems to be most prone to overflow into the broader field, and because it is out of this department that sociologists are now being chiefly recruited. But there are many other sciences or branches of learning that occupy practically the same relative position. It is here that history stands, while ethnology, ethnography, and demography, with other attendant branches of anthropology, bear so strongly upon the great science of man in the social state that it is difficult to prevent them from forcing their way into it. And each of these has its specialized phenomena to be set aside and cultivated as separate departments or sciences. Reverting to a former illustration, we may regard sociology as one of the great natural orders of cosmical phenomena under which we may range the next most general departments as so many genera, each with its appropriate species. That is, the classification of the sciences may be made strictly synoptical. When this is done it will be possible for philosophers, like good systematists, to avoid making their ordinal characters include any properly generic ones, or their generic characters include any that are only specific.

Thus understood, sociology is freed from the un-

necessary embarrassment of having hanging about it in more or less disorder a burden of complicated details in a great variety of attitudes which make it next to impossible to secure due attention to the fundamental principles of so vast a science. These details are classified and assigned each to its proper place (genus or species), and the field is cleared for the calm contemplation of the central problem of determining the facts, the law, and the principles of human association.

I would not have it inferred from the high systematic rank thus given to sociology that the logical order in which the entire scheme is to be taken up and studied or taught is to begin with the highest or ordinal principles and end with the lowest or specific ones. Quite the contrary. Sociology is an advanced study, the last and latest in the entire curriculum. It should perhaps be mainly postgraduate. It involves high powers of generalization, and what is more, it absolutely requires a broad basis of induction. It is largely a philosophy, and in these days philosophy no longer rests on assumptions, but on facts. To understand the laws of society the mind must be in possession of a large body of knowledge. This knowledge should not be picked up here and there at random, but should be instilled in a methodical way. It should be fed to the mind with an intelligent purpose in view, and that purpose should be the preparation of the mind for ultimately entering the last and most difficult as

well as most important field of human thought, that of sociology. Therefore history, political economy, and the other generic branches should first be prosecuted as constituting the necessary preparation for the study of the higher ordinal principles.

And apropos of this purely pedagogic question, let me emphasize another principle which we also owe to Comte. I have called his system a natural system, and I use that term in the same sense here as when, as a botanist, I speak of the natural system of plants. The order is the order of nature and not of man, and the several sciences not only stand naturally in this order but are genetically affiliated upon one another in this order. That is, each of the five great natural groups rests upon the one immediately below it and grows out of it, as it were. From this it necessarily results that this is the true order in which they should be studied, since the study of each furnishes the mind with the proper data for understanding the next higher. The student, therefore, who advances in this order is approaching the goal of his ambition by two distinct routes which converge at the desired stage. He is laying the foundation for the understanding of the more complex sciences by acquainting himself with the simpler ones upon which they successively rest, and he is at the same time mounting upward in the scale of generalization from the specific and generic to the ordinal or higher groups in a systematic classification. The natural arrangement of

the great coördinate groups is serial and genetic. The term "hierarchy" applied to it by Comte is inappropriate, since there is no subordination, but simply degrees of generality and complexity. There is genetic affiliation without subordination. The more complex and less exact sciences may be regarded as the children of the more simple and exact ones, but between parent and offspring there is no difference of rank. In contrast with this, the other classification, which I have called synoptical, is a true hierarchy, such as was taught to exist among the angels. It will be easier to comprehend if we liken it to the system of ranking that prevails in an army. The two kinds of classification are entirely different in principle, and the last named occurs independently in each of the great serial groups.

Now the pedagogic principle alluded to is that none of the more complex and less exact sciences can be properly understood until after all the simpler and more exact ones below it have first been acquired. What Comte insisted upon was that no one was competent to treat the higher sciences who was ignorant of the lower, and the same would of course be true of teaching. But the important qualification should be made that this canon does not imply a mastery of the details of these sciences, but only a comprehensive grasp of their principles. Thus qualified I believe it to be sound, and it is very important to set it forth at such a time as this when mathematicians, astronomers, and physi-

cists, having no acquaintance with biology, psychology, or sociology, are setting themselves up, on the strength of their reputation in the simpler fields, as authorities on economics and social and political science. And not less forcibly is the truth of this principle exemplified in those economists who almost boast that they know nothing of biology and the other great sciences from which the broadest principles of their own department are derived.

We see, then, the high place which sociology, properly defined, should hold among the sciences, and how clear and incisive are the boundaries which mark it off from all other branches of learning. It is the cap-sheaf and crown of any true system of classification of the sciences, and it is also the last and highest landing on the great staircase of education.

CHAPTER II

RELATION OF SOCIOLOGY TO COSMOLOGY[1]

THIS is not a "chance world," but a world of law. Both science and philosophy teach that every fact and every phenomenon is indissolubly linked to every other and that change is the result of some antecedent change and the occasion of some subsequent change. Any conceivable fact or thing may therefore be regarded as a term in a series which is infinite in both directions. In science this is called the law of causation; in philosophy it is called the law of the sufficient reason.

A feeble and imperfect recognition of this law has led many minds to a very erroneous conclusion, a conclusion which is, if possible, worse in its practical effect upon human thought and action than would have been the belief in a purely chance world. It has led to a false idea of the relation of man to the universe. Indeed it is responsible for the two false theories which have most retarded the true progress of mankind, viz., optimism and pessimism.

Man is correctly to be regarded as simply one

[1] *American Journal of Sociology*, Vol. I., No. 2, Chicago, September, 1895, pp. 132–145.

of the terms in the great cosmical series, the product of antecedent causes and the cause of subsequent effects, and until he is so understood the true relation either of man to the universe or of sociology to cosmology cannot be correctly known. Man's place in the organic series will be the subject of the next chapter. The more general question only of his relation to the world at large can be considered here. The first important fact to be noted is that to his slowly developing intellect the universe has ever been a great enigma. To solve this enigma has been the universal problem of the human mind. But man has been put into possession of no key to this solution and has attacked the problem wildly and at random, utterly unqualified to make the least impression upon it. The book of nature which was open to him was but a collection of Sibylline leaves that had been first stirred by the wind. Not only were things not always as they seemed, but outside of the very simplest phenomena, everything was utterly different from what it seemed. Almost everything was really just the reverse of what it seemed, and the universe was a vast paradox. The sky seemed to be a great vault of solid matter which he called for this reason a "firmament." The heavenly bodies seemed to move across this vault at varying rates, and their reappearance led to the notion that they revolved around the great level cake of earth and water on which he dwelt. The invisible air and other gases

were likened to mind or spirit. All natural causes were explained after the analogy of human effort in the intentional production of effects, and the earth and air were peopled with invisible and often malignant spirits as the only recognized agents. And thus were built up great systems of magic, superstition, and mythology. The errors thus forced into man's mind came to receive the sanction of religion which rendered it vastly more difficult to dislodge them. This herculean task has been the mission of science, for the truth lies deeply buried under this mass of error at the surface and can only be brought to light by the most prolonged and patient research in the face of this time-honored prejudice. The progress of man and society has been strictly proportioned to the degree to which hidden realities have thus been substituted for false appearances.

As a somewhat anomalous but very important example of the erroneous ideas which the human race must needs acquire and reluctantly surrenders may next be considered the optimistic habit of thought. Optimism can scarcely be called a doctrine. It does not result, like most erroneous beliefs, from a false interpretation of the facts which nature presents to the untrained faculties. It is rather the original, unreflective state of the pre-social mind. It is the survival of the most useful of all instincts, that of self-preservation. It was well adapted to that state, because to the ani-

mal it mattered not whether it was true or false. It is still a useful attitude to the swarming millions of human beings who do not reflect. But for it the realization of their unhappy lot, which it prevents, would multiply their misery and render life intolerable. But we are here considering its effect upon society, and it is easy to show that it is bad. It breeds stagnation and stifles progress. It yields contentment, and contentment means inaction. Strange as it may sound, just as the only healthy state of the intellect is doubt, so the only healthy state of the feelings is discontent. This of course assumes that there is something to doubt and something to improve, but there has never been an age when error did not stalk abroad or when misery was not the lot of the greater part of mankind.

The phase of optimism which most concerns the question of the relation of society to the universe is that unreasoned belief which I have called the "anthropocentric theory."[1] The idea that man is in any sense a favorite of nature is false and highly prejudicial to the progress of correct conceptions in social science. It may be called collective optimism, and results in social stagnation, just as personal optimism results in individual stagnation.

The extreme opposite of optimism is pessimism. It differs from it as much in its origin and nature as

[1] Transactions of the Anthropological Society of Washington, Vol. I., Washington, 1882, pp. 93–103; *Dynamic Sociology*, Vol. II., New York, 1883, pp. 50–73.

it does in its character as a belief. While optimism is wholly unreasoned and springs from the feelings, pessimism is exclusively a product of reason and resides in the intellect. Optimism is that hope that "springs eternal in the human breast" and defies the hard facts of existence. Pessimism recognizes the facts and coldly chokes every hope at its birth. But pessimism is also false, first because many hopes are realized, and secondly, because the representation in the present of the good anticipated in the future is itself a good at least of secondary order.

What then is man's true relation to the universe? Is there a true mental attitude that lies between these two false attitudes? There certainly is. It is not a belief or a creed; it is the simple recognition of the truth. The truth is that nature is neither friendly nor hostile to man; neither favors him nor discriminates against him. Nature is not endowed with any moral attributes. It is, as I said at the outset, a domain of rigid law. Man is a product of that law, but he has reached a stage on which he can comprehend the law. Now, just because nature is a domain of rigid law, and just because man can comprehend that law, his destiny is in his own hands. Any law that he can comprehend he can control. He cannot increase or diminish the powers of nature, but he can direct them. He can increase or diminish the amount of power that is to be exerted at any given point. He can focalize the rays of the sun; he can divert the courses of the rivers; he can direct

the currents of the air; he can vary temperatures; he can change water to steam and set the steam to work in propelling machinery or ships or railroad trains; he can utilize electricity. His power over nature is unlimited. He can make it his servant and appropriate to his own use all the mighty forces of the universe.

Both optimism and pessimism are passive states of mind. The true state is an active one. Optimism and pessimism assume nature to be in an active state toward man. The true attitude makes nature passive and man active. To the developed intellect nature is as clay in the potter's hands. It is neither best nor worst. It is what man makes it, and rational man always seeks to make it better. The true doctrine, then, is *meliorism*—the perpetual bettering of man's estate. This will be possible in precise proportion to man's knowledge of nature, so that the condition of the race ultimately depends upon the degree of intelligence that it shall attain.

Optimism may be said to be the thesis, pessimism the antithesis, and meliorism the synthesis of man's relation to the universe. The optimist says: Do nothing, because there is nothing to do. The pessimist says: Do nothing, because nothing can be done. The meliorist says: Do something, because there is much to do, and it can be done.

Man alone can block the wheels of his own progress. Neither optimism nor pessimism can be justified in a state of society where free play is allowed

to all the human faculties. For a race whose intellect is fully matured these mental attitudes are only adapted to a condition of profound ignorance of the laws of nature, or of complete subjugation of the masses to the power of the few. Now, it is a historical fact that these two habits of thought have, in the élite of mankind, only prevailed under one or the other or both of these conditions. Optimism is preëminently the child of ignorance. By ignorance I mean solely the absence of knowledge relative to natural things, processes, and laws, and not lack of capacity to know these things and profit by such knowledge. Pessimism is more especially a product of social oppression. It results from an abandonment of all hope of relief from the power of a superior caste of men to keep the mass in physical subjection. In a word, pessimism is the product of a hostile social state.

It is impossible to separate this aspect of the question from the great fact that the world has always been swayed by religion. The foregoing considerations furnish an excellent basis for comparing the great religions that have embraced the greater part of the human race. Religion is reason applied to life. Those who flippantly contend that a religious condition argues feeble intellectual powers make an immense mistake. But this view is by no means confined to the opponents of religion. It is clearly implied or openly expressed by many who strongly defend it. The latest of this class of phi-

losophers is perhaps Mr. Benjamin Kidd. In his *Social Evolution* he makes religion the mainspring of human progress and charges the reason with anti-social and anti-progressive tendencies. Whatever there may be true in his book, and its tone is generally healthy, it is not true, as he maintains, that religion and reason are opposed, or that religion proceeds from an unreasoning, or, as he expresses it, an "ultra-rational" sanction. Religion is rational through and through. It is not to be compared to an instinct, such as both animals and men possess, adapted to produce such automatic activities as result in the safety and healthy development of races. On the contrary, it often and usually impels man to do just those things which his instincts and his natural propensities would never dictate. It counteracts the animal nature of man, and is one of those things which distinctively mark him off from the animal world. It could be easily shown that this is precisely the rôle that reason plays everywhere, and it is the failure to perceive this that has led many political economists and others into the gravest of errors in philosophizing about man.

Religion has its very origin in reason. No animal has developed even the rudiments of a religion. It is an exclusively human institution, much more so than society. It is the product of thought; an attempt to explain the universe. In this, its primary quality, it does not differ in the least from science, and no true philosopher can doubt that

these two great human movements, starting out from the same base, will eventually arrive at the same goal.

Now, of the two great religions of the world, using the term in its broadest sense and ignoring entirely the subdivision into sects, that of the East and that of the West, in the modern use of those terms, the former is pessimistic; the latter optimistic. This is because, while both were perhaps equally ignorant of the laws of nature, the inhabitants of India exercised their intellectual powers far more than did the peoples of western Asia and southern Europe. It is also probably true that the conditions of existence for the masses of India under a system of castes were much less favorable than those of western peoples. For these and other reasons religion in the East resulted in pessimism while in the West it took the form of optimism. The Orientals sought to escape the evils of life in Nirvana, which, however much scholars may dispute about its exact meaning, is certainly a wholly negative state. Christians and Mohammedans, on the other hand, espoused the doctrine of immortality, which is a doctrine of hope and promises a state which is intensely positive. With their belief in an ultimate righteous retribution they were able to bear their temporal ills with fortitude and to enjoy whatever good this world had in store for them. Yet because it is in the West that the great civilization of the world at last came forth it will not do to argue

that this was the result of an optimistic religion. Scarcely a sign of this was perceptible during the first fourteen centuries of the Christian era, and the whole of it has been the product of the last five centuries. Civilization as we now understand it is altogether due to the abandonment of the optimistic attitude which prevailed before the Protestant Reformation, and the adoption of the spirit of meliorism, to which Protestantism was more favorable. In fact, the Reformation is rather the product than the cause of a growing meliorism, and as soon as liberty of opinion and freedom to investigate the laws of nature were achieved the march of civilization had already begun.

We are now prepared to consider the true relation that developed man in the social state bears to the great cosmos of which he is a part. That cosmos, as we have seen, must be contemplated as wholly unintelligent and wholly passive. Man must regard himself as in full possession of the authority to subjugate it and to appropriate it, to reduce all the powers of nature to his service and to apply all the materials of the universe to his own personal use. Notwithstanding the rigid law to which all things are subject, he is to look upon the universe as in a certain sense fortuitous. While there is a cause for all things there is no intelligent reason why anything should be as it is. That this little planet of ours happens to be peopled with life is merely an accident, or rather the convergence of

a number of accidents. So far as can be judged from what we know of the essential conditions to life, the earth is highly favored among the planets of our system, and it may well be that this is the only one out of them all on which the conditions to a high development exist. It seems impossible that the great planets Jupiter and Saturn can be inhabited by any such beings as have been developed on our globe; and careful studies of temperatures that must prevail on Venus and Mercury seem to negative such an assumption for either of them. If Mars possesses life, it must be inured to somewhat severer conditions than generally prevail with us, but it is admitted that these do not exclude the idea. If Jupiter radiates his own internal heat, he may render some of his swift-flying moons inhabitable, but most of the satellites of the solar system are doubtless as dead as our moon, which has neither water nor air. The sun is an enormous mass of matter 1,400,000 times as large as the earth and containing 99.866 per cent of the matter of the whole solar system. Yet it is known to be in a state of such intense heat that some of the metals which it requires great heat even to melt are not only melted but volatilized. No one therefore conceives that there can be any life or intelligence on the sun. Think of the optimism that is required to make out a favorable case from such facts! Even if all parts of all the planets were inhabited, they would together make only

$\frac{1}{47}$ part of the area of the sun's surface, while that of the earth alone is only $\frac{1}{12552}$. But our sun is only one of the lesser fixed stars, and it may be assumed that similar conditions prevail throughout the universe.

If we contemplate the earth itself, we find an analogous state of things. The period that man has inhabited the earth is very small compared with what we know its age to be. We can scarcely speak more than relatively, but the certainty is as great as if we could fix dates for geologic events. Of the enormous thickness (150,000 feet) of sedimentary rocks that can be measured from the earliest Archean to the latest Pleistocene those that have been deposited since man made his appearance form only a minute fraction. In quite recent times some attempts have been made to determine approximately in years the age of the earth. The results vary greatly, but are constantly growing more uniform. The physicists, astronomers, and geologists, who all use widely different data and methods, and who formerly differed greatly, have latterly come to a much closer agreement, which argues some approach to the truth. Using the most moderate ones, the crust of the earth seems to have been fully formed not less than 100,000,000 years ago. Some form of life has probably existed on it during nearly all that period. But paleontology teaches that life, though slowly increasing in development, was of too low an

order to be capable of intelligence until man appeared. Yet what are the estimates of man's entire historic and prehistoric existence? The most extravagant of them do not go back 500,000 years. More probable ones stop at 200,000. So that man seems to have shared the life of the globe during only one five-hundredth part of its developed existence. But even this was nearly all spent in an almost completely animal state. Intelligence never reached the point at which it could furnish a record until within at most 25,000 years of our present epoch, and authentic records are confined to the past forty or fifty centuries. Thus only one fortieth or fiftieth of the little span of man's existence belongs to the age of culture, however rude. And what is there to be said in favor of the condition of the world even at its best? Read human history. As Professor Huxley has said, if nothing better was in store than what we have thus far had we should hail the advent of some friendly comet that should pass along and sweep the whole phantasmagoria out of existence. There is what we call human progress, but what is it but a rhythmic and only partial success in rendering a worse condition a trifle better? Even this is accidental and may go backward instead of forward. There are as many things that retard as there are that advance the race, and human progress, like the "regulator" of a steam engine, seems to be adjusted so as to defeat itself. Much of it is purely accidental. No one will ever

know but that the state of civilization would have been a century ago what it is to-day but for some trifling accident. I once heard a learned and conservative physicist say that Aristotle's teachings had delayed the progress of man's knowledge of the laws of nature a thousand years. What evidence is there that there is any power making for the increase of knowledge? Our acquaintance with the true nature of animals and plants and with man depends largely upon what can be learned of their history throughout past ages of the world. Yet what is the nature of the geological record? Every practical paleontologist knows and always feels that discovery in this field depends upon the merest chance, nay, upon a coincidence of two chances, first, that anything has been preserved, and secondly, that it will ever be found. He labors under the perpetual feeling that the most important of discoveries may in fact never be made, and that he may be at any time, without knowing it, walking over the keys to the secrets of the universe. And after man acquires great knowledge and power over the universe, so that he can enlist all the forces and materials of nature in his service, the inequalities in individual opportunities, coupled with the intense egoism which has alone enabled the race to survive, practically robs society of the results by placing the masses in the power of the few, under which system neither class can really enjoy the fruits of intelligence and industry.

All this may have a pessimistic sound. In fact it constitutes the contribution that pessimism has made to social philosophy. It has taught us to open our eyes, to look the facts in the face, to listen to no siren song, to see and bravely acknowledge the truth of man's condition and his relation to the universe. So long as we do not exaggerate, so long as these relations, however bad, are the true relations, no possible harm can come of knowing and realizing the truth. It is the only healthy attitude, while on the other hand, the ignorance of this truth or the refusal to avow it is fatal to progress. But it will not do to stop here. It is not enough merely to learn that things are bad. The two errors of pessimism have been, first, that of overdrawing the picture, and second, that of failing to learn the lesson which the picture teaches.

Having tried to paint the picture true to life, let us next inquire what the lesson is that we should learn from its careful study. The first and most elementary principle of that lesson is that the very fortuity from which this entire state of things results is laden with the highest hopes for mankind; that no other condition could furnish any such ground for hope; that the opposite or optimistic view, were it the true one, would really lead to despair. The optimist may be compared to a young man without employment or means of subsistence who lives in the perpetual and illusive hope that some rich relative or ac-

quaintance may bequeath him a fortune. Contrasted with this, the meliorist may be likened to a young man who, recognizing the truth that unearned fortunes are not given to idle adventurers, goes resolutely to work and strives by honest industry to build up a fortune for himself. And this is the true lesson for human society. There is no room for social Micawbers. Whatever "turns up" must be turned up. The passive attitude is suicidal. This folding of the arms and resignation to fate is certain to meet its fate. The cosmic Juggernaut will roll over and crush those who throw themselves before it. The logic of science is action, and only by busy brains and busy hands can the recognized evils of the world be lessened or removed.

The second principle in this great lesson is that it is only because all nature is a domain of rigid law, of absolute impartiality, and devoid of all moral quality and all intelligence, that man can hope to carve out of it his fortune or shape his destiny. If it had sympathies and preferences and prejudices; if it had intelligence and will, it would be utterly unmanageable and would ever remain the master and despot of man, as it practically has been during most of his early history, and it could never become his servant and all-powerful aid and ally as it is fast getting to be and is certain ere long fully to become. Thus the hardest facts of existence are seen to embody the germs of the

brightest hopes. Those dark realities which have been taken as arguments for pessimism are themselves, when correctly understood, the foundations of the only sound philosophy of social progress.

The only proper attitude on all these questions is to view the universe objectively. Dismissing forever all idea of what it ought to be, we must simply seek to determine what it is. We must also divest ourselves wholly of the notion that we can determine this by pure reflection. There is no fixed way in which things must be which enables us to reason out the way they are. While, of course, the way they are is really the only way they could have been, still the antecedent causes which have brought them into existence, besides being unknown to man, are so infinitely complex that they are for the most part wholly beyond his grasp. For example, any one can conceive of a solar system in which no single relation is the same as exists in ours. Any one can conceive of beings inhabiting a planet all of which shall be entirely different from any of those that inhabit this earth. The plan of structure of organic forms depends entirely upon the initiative which first launched each type upon its career. This initiative is wholly fortuitous. The vertebrate type of animals, for example, must be looked upon as due to some primordial accident, as it were, *i.e.*, some coincidence of causes, external and internal, at the appropriate time and place, that happened to determine that

type of structure which proved better adapted to sustain the highest organization thus far attained in the animal kingdom. If this particular type had not chanced to be tried, some other would have stood highest, but it is as likely to have been a still better one as to have been a poorer one for the purpose. If the planet Mars is really the home of living beings, the chances of the vertebrate type of structure occurring there are only as one to infinity. Yet some superior type may be developed there. And if there be on that planet or anywhere else in the solar system or in the universe a master being related to other beings in any such way as man is related to the other living creatures on this earth, the chances are again infinity to one against his possessing the form or any of the leading physical attributes of human beings.

All this may at first sight look like wild utopian speculation. But its utility does not lie in any knowledge it yields as to the inhabitants of other planets. It lies in teaching the great lesson that no knowledge of anything can be gained by speculation, and that our only knowledge consists in the actual investigation of facts that lie within our reach. We must study the tangible, visible, demonstrable world and find out what it contains. There is no telling what we shall find. No preconceived notions of what we ought to find, much less of what we ought not to find, must influence the quest for truth. This is not, however, to discourage

the use of hypotheses. They are the searchlights of science. But their use requires due caution, and a hypothesis must not be confounded with a thesis.

Now, while it is true that all those aggregations of cosmic elements that give multiplicity and variety to the content of the universe are in the sense explained wholly fortuitous and might as well have all been different from what they are, it is a legitimate question to inquire whether there remains anything which is not thus fortuitous, and which must in the nature of things be what it is. And we find that there are such things. There are essentials as well as accidents, but they belong to a different category. If we examine the matter closely, we will see that all the cases considered come under the head of *form* — worlds, plants, animals, men. But there is another great class of cases which fall under the head of *forces* or principles, and these when carefully examined are found not to be variables but constants — the constants of nature. By this I do not mean that they always exist at all times and places, although this is probably true of the universal gravitant and radiant forces, of which, indeed, all the other forms of energy are doubtless special conditions. I refer in general to what is known as the principle or law of evolution, and in particular to the three latest phases of that law which are called respectively, Life, Feeling, and Thought. For while the forms through

which these modes of energy are manifested may vary to any required extent, I cannot conceive that the attributes themselves could under any circumstances be other than they are. For example, while the fancied inhabitants of Mars might all differ in every other particular from those of this earth, it is impossible to conceive them as not endowed with life at least, although we can suppose them devoid of feeling in the same sense that we conceive plants to be. But if we imagine them to have advanced even to the lowest animal stage, we are obliged to endow them with feeling, consciousness, will. And when we speak of a remote planet being "inhabited," although we can abstract from those inhabitants every physical character that belongs to man and conceive them as dragons, or satyrs, or monsters of any form, we cannot imagine them devoid of reason and intelligence in addition to the attributes of life and sensibility.

Coming back to earth and confining ourselves to what we actually know, we thus see that three great steps in evolution have been taken since the surface of our globe became firm enough and cool enough to render the first one possible. I call these the great cosmical *crises* of the earth's history — the origin of life, of feeling or consciousness, and of intellect or reason. These have occurred in this order at different geologic epochs, and certainly with an enormous interval between the second and third. The forms through which the first and second have

manifested themselves — the plants and animals — are innumerable. That through which the last has chiefly manifested itself is man, a single species of the animal kingdom. And it is altogether probable that any planet, in its progress from a semi-nebulous state to an encrusted globe, would evolve the structures necessary to the exhibition of these three forms of cosmic energy, although, as already remarked, the organs and organisms manifesting them might have no external resemblance to those with which we are acquainted.

We thus arrive, after threading the vast mazes of cosmic evolution, at man, the only being known to us who is endowed with all three of the powers described, the only self-conscious, rational, and intelligent product of nature. We find him to be also a social being. The question therefore naturally arises, Is sociability a third and still higher form of storing and expending cosmic energy? There are objections to this view, the principal one being that certain forms of sociability appear among creatures to which intelligence cannot be imputed, not merely among many of the higher mammals and other vertebrates, but notably among insects. Here instinct seems to have brought about the same general economic system that has resulted in part at least from rational calculation in man. But this question belongs more properly to a later chapter, and is only raised here as a natural sequel to the broader problems that we have been discussing. It is only by

means of such a complete orientation of the mind that the true relations subsisting between sociology and kindred sciences can be clearly and correctly perceived, and these wider aspects of the subject belong preëminently to social philosophy.

CHAPTER III

RELATION OF SOCIOLOGY TO BIOLOGY[1]

THE thesis of this chapter is that sociology does not rest directly but indirectly upon biology. The science upon which it does directly rest is psychology, and this direct relation will be the subject of the fifth chapter. The fourth will be devoted to its relations to that highest product of biologic law, the human species. We are at present concerned with the more general relations between sociology and biology considered as abstract sciences, *i.e.*, between the laws of life and those of association.

Coupling the present discussion as closely as possible with the previous one, we may say at the outset that nature must not be conceived as aiming to accomplish any definite object by the introduction of life. There has undoubtedly been a rhythmic but general tendency towards the improvement or perfecting of structures throughout the history of the earth since life was introduced, but there is no promise that this is always to continue. All who have studied the subject, whether from the geological,

[1] *American Journal of Sociology*, Vol. I., No. 3, Chicago, November, 1895, pp. 313–326.

physical, astronomical, or purely philosophical point of view, agree that the life-sustaining period of a planet is only a relatively short one between vastly longer ones to precede and follow it, in which the conditions to life are absent. In Herbert Spencer's great scheme of the redistribution of matter, dissolution is as much a factor as evolution, and whether we accept the estimate of Newcomb that the life period of this earth is to continue ten million years, or that of Helmholtz that it will last seventeen million years, or that of Shaler that we may hope for yet one hundred million years, we must in any case admit a limit, and as it would seem, must assume that the last stages of that period will be marked by the gradual decline, as the first stages are with a slow advance in the state of living beings. Everything indicates that we, the occupants of this earth in the historic period of the human race, are living at a time when life conditions are in their ascending stage, and that our teeming world is, as it were, rejoicing in the morning of creation. The forces of evolution are in full play, and therefore, while dismissing the idea of purpose, we may legitimately inquire what are the tendencies of evolution. There is no harm either, for the sake of terse expression, in using teleological language, which is about all the language we have, provided we first disclaim the old-time teleological implications. Dr. Asa Gray, who, while fully accepting evolution in the Darwinian sense, believed in what he characterized as "evolutionary

teleology," answered the general question in the following words: —

"To accumulate the greatest amount of being upon a given space, and to provide as much enjoyment of life as can be under the conditions, is what Nature seems to aim at."[1]

I was struck with this passage when I first read it, because I had long been led to adopt a formula practically identical with the first part of his, viz., that the object of nature was to transfer the maximum amount of inorganic matter to the organized state. This seems to me to be the whole tendency of organic evolution, and organization in its broadest sense — the differentiation of parts and integration of wholes, the development, perfection, multiplication, specialization, and refinement of structures — is only the improved means to this general end. I have considered all the apparent objections to this theory, which need not be entered into here, and satisfied myself that they are not valid, and that the law as stated by Dr. Gray is altogether sound. This does not, however, include the second clause of his formula relating to the enjoyment of life, which I do not regard as true.

The law is, however, much broader than this, or rather, this may be regarded as only one of the applications of a much broader law. That law is that evolution is essentially a process of storing cosmical energy. All cosmical energy results from the inter-

[1] *Darwiniana*, New York, 1877, p. 175.

action of the great correlative and antithetical (rather than antagonistic) gravitant and radiant forces of the universe. When these forces bear a certain ratio to each other, their interaction produces systems primarily chemical, then planetary, and finally biotic. The whole may be correctly characterized as so many forms or modes of organization. There is no more perfect example of organization than a solar system, of which ours is only one of thousands. But every chemical combination is also a system no less perfectly organized. In chemical combinations, however, there are all degrees of complexity, from the atom of hydrogen to the molecule of albumen 5000 times larger. And beyond this last is protoplasm whose chemical formula cannot be written, but which constitutes, in the words of Huxley, "the physical basis of life." It could be shown (and I have endeavored to show) [1] that at each step in this ascending series of organized products a new and higher energy is acquired, that of protoplasm constituting the highest expression of this law in the chemical series and fairly bridging over the interval between the inorganic and the organic.

Although chemical organization can go no farther than the production of protoplasm, the law does not cease to act, but henceforth it must follow a somewhat different method. Up to this stage all activity is molecular. In the next or biotic stage it is molar. In all inorganic products the motion

[1] The *Monist*, Vol. V., Chicago, January, 1895, pp. 247–263.

which their increasingly active properties prove to exist is imperceptible to sense. In protoplasm and all organic products the motion is perceptible to sense. It is here called spontaneous, and spontaneous mobility is supposed to be a criterion of life, but in reality the imperceptible motion of inorganic matter is as truly spontaneous as are the activities of a living organism. Biotic organization takes place by means of structure. The lowest organisms are said to be unorganized. They consist entirely of protoplasm. But the biological unit, the cytode or enucleated cell, is a very complex body compared to a molecule of protoplasm. The phenomena of heredity show that there are still simpler elements or units having very varied qualities. These are probably not simple molecules of protoplasm, although these need not be assumed to be altogether alike, but would appear to be multiform aggregations of such molecules carrying in their composition the hereditary tendencies of ancestral organisms. The Protozoa and Protophyta, or Protist kingdom, are unicellular organisms, and their organization is in a sense molecular. At least they are devoid of true organs and even of true tissues.

Biotic organization proper consists of some kind of combination of the biological units or cells into tissues and organs, thus forming a compound or complex body called an organism. Such combinations are formed in a great variety of ways, and

the primary units are integrated in all degrees. In the highest organisms there is complete integration and interdependence of parts. Every organism is held together and rendered effective entirely by protoplasm, every organ and part being linked to every other by threads of this substance called nerves. The life of plants is as dependent upon protoplasm as that of animals, but the protoplasm resides in the cells and controls the vegetative processes. The important fact from our present point of view is that every living organism is an organized mechanism for the storage and voluntary expenditure of energy, and as such does not differ in principle from the chemical products of the inorganic world. The force that resides in the organic world is all derived from the properties of protoplasm, and these are in turn derived from chemical affinities. We might carry the series back and find that all energy originally emanates from the primary forces of gravitation and radiation which permeate the universe. The reason why a developed organism has more power than an undeveloped cytode is that a much larger amount of protoplasm has been coördinated into an economic system and made to exert its force in unison. Its entire combined energy may be directed at will to a single purpose. The system is moreover a mechanism or machine which employs a number of the well-known principles of mechanics, such as the lever and fulcrum, the

pulley, the force-pump, valves, bellows, etc. But mainly it may be looked upon as a system of coöperation among a multitude of protoplasmic bodies with all the advantages that always result from combined action. These are always much greater than the simple sum of the several powers of the component elements. But the principle of coöperation, so important for sociology, is after all nothing more than a modification of the one uniform and universal process of concentration or focalization of the cosmic energy for special purposes, and the single object under all circumstances is greater efficiency.

I scarcely need point out the application of so important a principle to sociology, but it is too early to discuss this subject. I have presented this fundamental view of the nature of an organism in order the better to approach the general question whether society is capable of being logically compared to an organism in the biological sense. Such a comparison, so far from being anything new, has been a favorite one with some writers since the time of Plato and Thucydides. It was stoutly held by Hobbes and also by Hegel. Comte set it forth with great clearness and avoided most of the objections of other authors by not attempting to claim the specific resemblance of parts in the two sciences. Of all authors who have defended it and specifically illustrated it Mr. Herbert Spencer must be placed first. His strongest pres-

entation of this subject is not to be found in his *Synthetic Philosophy*, although he has treated it there, but in an article on "The Social Organism," originally contributed to the *Westminster Review* in 1860.[1] This article was subsequently revised by him and many alterations made. In this form it is published in the *Essays, Scientific, Political, and Speculative*. In view of the great importance of the subject at the present stage of the argument, and in order that it may be set forth in its strongest form, I have felt that I could not do better than to devote a considerable part of this paper to a literal reproduction of Mr. Spencer's treatment of it in this essay. I quote from the American edition of the *Essays*, 1891 : —

We propose here to show what are the analogies which modern science discloses to us.

Let us set out by succinctly stating the points of similarity and the points of difference. Societies agree with individual organisms in four conspicuous peculiarities:

1. That commencing as small aggregations, they insensibly augment in mass; some of them eventually reaching ten thousand times what they originally were.

2. That while at first so simple in structure as to be considered structureless, they assume, in the course of their growth, a continually increasing complexity of structure.

3. That though in their early undeveloped states there exists in them scarcely any mutual dependence of parts, their parts gradually acquire a mutual dependence, which

[1] New Series, Vol. XVII., January 1, 1860, pp. 90–121.

becomes at last so great that the activity and life of each part is made possible only by the activity and life of the rest.

4. That the life and development of a society is independent of, and far more prolonged than, the life and development of any of its component units: who are severally born, grow, work, reproduce, and die, while the body politic composed of them survives generation after generation, increasing in mass, completeness of structure, and functional activity.

These four parallelisms will appear the more significant the more we contemplate them. While the points specified are points in which societies agree with individual organisms, they are points in which individual organisms agree with each other, and disagree with all things else. In the course of its existence every plant and animal increases in mass, in a way not paralleled by inorganic objects: even such inorganic objects as crystals, which arise by growth, show us no such definite relation between growth and existence as organisms do. The orderly progress from simplicity to complexity, displayed by bodies politic in common with all living bodies, is a characteristic which distinguishes living bodies from the inanimate bodies amid which they move. That functional dependence of parts which is scarcely more manifest in animals or plants than nations, has no counterpart elsewhere. And in no aggregate except an organic or a social one is there a perpetual removal and replacement of parts, joined with a continued integrity of the whole.

Moreover, societies and organisms are not only alike in these peculiarities, in which they are unlike all other things; but the highest societies, like the highest organisms, exhibit them in the greatest degree.

We see that the lowest animals do not increase to anything like the sizes of the higher ones; and, similarly,

we see that aboriginal societies are comparatively limited in their growths. In complexity, our large civilized nations as much exceed primitive savage tribes, as a vertebrate animal does a zoöphyte. Simple communities, like simple creatures, have so little mutual dependence of parts that subdivision or mutilation causes but little inconvenience; but from complex communities, as from complex creatures, you cannot remove any considerable organ without producing great disturbance or death of the rest. And in societies of low type, as in inferior animals, the life of the aggregate, often cut short by division or dissolution, exceeds in length the lives of the component units, very far less than in civilized communities and superior animals; which outlive many generations of their component units.

On the other hand, the leading differences between societies and individual organisms are these:

1. That societies have no specific external forms. This, however, is a point of contrast which loses much of its importance, when we remember that throughout the vegetal kingdom, as well as in some lower divisions of the animal kingdom, the forms are often very indefinite — definiteness being rather the exception than the rule; and that they are manifestly in part determined by surrounding physical circumstances, as the forms of societies are. If, too, it should eventually be shown, as we believe it will, that the form of every species of organism has resulted from the average play of the external forces to which it has been subject during its evolution as a species, then, that the external forms of society should depend, as they do, on surrounding conditions, will be a further point of community.

2. That though the living tissue whereof an individual organism consists forms a continuous mass, the living elements of a society do not form a continuous mass, but are

more or less widely dispersed over some portion of the earth's surface. This, which at first sight appears to be a fundamental distinction, is one which yet to a great extent disappears when we contemplate all the facts. For, in the lower divisions of the animal and vegetal kingdoms, there are types of organization much more nearly allied, in this respect, to the organization of a society, than might be supposed — types in which the living units essentially composing the mass are dispersed through an inert substance, that can scarcely be called living in the full sense of the word. It is thus with some of the *Protococci* and with the *Nostoceæ*, which exist as cells imbedded in a viscid matter. It is so, too, with the *Thalassicollæ* — bodies that are made up of differentiated parts, dispersed through an undifferentiated jelly. And throughout considerable portions of their bodies, some of the *Acalephæ* exhibit more or less distinctly this type of structure.

Indeed, it may be contended that this is the primitive form of all organization; seeing that, even in the highest creatures, as in ourselves, every tissue develops out of what physiologists call a blastema — an unorganized though organizable substance, through which organic points are distributed. Now this is very much the case with a society. For we must remember that though the men who make up a society are physically separate and even scattered, yet that the surface over which they are scattered is not one devoid of life, but is covered by life of a lower order which ministers to their life. The vegetation which clothes a country makes possible the animal life in that country; and only through its animal and vegetable products can such a country support a human society. Hence the members of the body politic are not to be regarded as separated by intervals of dead space, but as diffused through a space occupied by life of

a lower order. In our conception of a social organism we must include all that lower organic existence on which human existence, and therefore social existence, depends. And when we do this, we see that the citizens who make up a community may be considered as highly vitalized units surrounded by substances of lower vitality, from which they draw their nutriment: much as in the cases above instanced. Thus, when examined, this apparent distinction in great part disappears.

3. That while the ultimate living elements of an individual organism are mostly fixed in their relative positions, those of the social organism are capable of moving from place to place, seems a marked disagreement. But here, too, the disagreement is much less than would be supposed. For while citizens are locomotive in their private capacities, they are fixed in their public capacities. As farmers, manufacturers, or traders, men carry on their business at the same spots, often throughout their whole lives; and if they go away occasionally, they leave behind others to discharge their functions in their absence. Each great centre of production, each manufacturing town or district, continues always in the same place; and many of the firms in such town or district are for generations carried on either by the descendants or successors of those who founded them. Just as in a living body, the cells that make up some important organ, severally perform their functions for a time and then disappear, leaving others to supply their places; so, in each part of a society, the organ remains, though the persons who compose it change. Thus, in social life, as in the life of an animal, the units as well as the larger agencies formed of them, are in the main stationary as respects the places where they discharge their duties and obtain their sustenance. And hence the power of individual locomotion does not practically affect the analogy.

4. The last and perhaps the most important distinction is, that while in the body of an animal, only a special tissue is endowed with feeling, in society all the members are endowed with feeling. Even this distinction, however, is by no means a complete one. For in some of the lowest animals, characterized by the absence of a nervous system, such sensitiveness as exists is possessed by all parts. It is only in the more organized forms that feeling is monopolized by one class of the vital elements. Moreover, we must remember that societies, too, are not without a certain differentiation of this kind. Though the units of a community are all sensitive, yet they are so in unequal degrees. The classes engaged in agriculture and laborious occupations in general are much less susceptible, intellectually and emotionally, than the rest; and especially less so than the classes of highest mental culture. Still, we have here a tolerably decided contrast between bodies politic and individual bodies. And it is one which we should keep constantly in view. For it reminds us that while in individual bodies the welfare of all other parts is rightly subservient to the welfare of the nervous system, whose pleasurable or painful activities make up the good or evil of life; in bodies politic the same thing does not hold, or holds to but a very slight extent. It is well that the lives of all parts of an animal should be merged in the life of the whole; because the whole has a corporate consciousness capable of happiness or misery. But it is not so with a society, since its living units do not and cannot lose individual consciousness, and since the community as a whole has no corporate consciousness. And this is an everlasting reason why the welfare of citizens cannot rightly be sacrificed to some supposed benefit of the state, but why, on the other hand, the state is to be maintained solely for the benefit of citizens.

The corporate life must here be subservient to the lives of the parts, instead of the lives of the parts being subservient to the corporate life.[1]

Such are the main agreements and disagreements between society and an organism, as Mr. Spencer sees them, and it will be noticed that the greater part of the disagreements are virtually explained away. He goes much farther into the subject in the remaining portion of the article, and even attempts to find and enumerate the specific homologues in animal organisms of many of the economic functions of society. Thus, "profit answers to the excess of nutrition over waste in a living body;" "the distributing apparatus of a society answers to the distributing apparatus of a living body;" he points out the "analogy which exists between the blood of a living body and the circulating mass of commodities in the body politic," and likens money to the blood-corpuscles. The arteries and veins correspond to the great rivers, railroads, and wagon roads. He treats the nervous system last, and rightly correlates it with government, but he seems to lose himself in the less important aspects of this subject, so that one is led to suspect that he fears to face it in its main aspects. In a footnote on page 305 he makes the significant admission that "if any specific comparison were made, which it cannot rationally be, it would be to some much lower

[1] *Essays*, etc., New York, 1891, pp. 272 ff.

vertebrate form than the human." This admission, taken in connection with the one already quoted, that society corresponds to the stage of animal development represented by the *Protococci*, *Nostoceæ*, and *Thalassicollæ*, "the primitive form of all organization," are quite in line with the position which I have been compelled to take on the question of a social organism; but we are certainly indebted to Mr. Spencer for this masterly essay. No one else has set forth this important subject with any such an array of illustration as this, and only thus could it be rendered worthy of serious consideration on the part of sociologists. But with such a presentation they are in position to take it up and consider its claims.

The one truth with which scarcely any one can help being impressed is the high degree of coöperation displayed among the several functions, which can only be due to the high degree of centralization that has been reached even in the least developed of the true organisms, such as are referable to any of the great groups recognized by zoölogists. That is to say, all these organs perform their functions under one central control. Mr. Spencer seems to have been so much impressed by the harmonies he discovers in the details that he practically lost sight of this important truth. It was not that he was not fully aware of it, for it is more to him than any one else that we owe the formulation of the great law that organic development proceeds by differentiation

and integration — that in proportion as the parts are multiplied they must be made subordinate to the whole. What he failed to see in his thorough comparison of an organism with society was that while the differentiations are often very similar there is very little resemblance in the degree of integration.

Professor Huxley was quick to seize upon this omission, and in a lecture entitled "Administrative Nihilism"[1] he dealt him some very heavy blows. The vulnerable point, as he clearly saw, in Mr. Spencer's argument was that in which he undertook to institute comparisons with the nervous system of animals. Applying himself directly to this point, he said: —

> Mr. Spencer shows with what singular closeness a parallel between the development of a nervous system, which is the governing power of the body in the series of animal organisms, and that of government, in the series of social organisms, can be drawn: —
>
> "Strange as the assertion will be thought," says Mr. Spencer, "our Houses of Parliament discharge in the social economy functions that are, in sundry respects, comparable to those discharged by the cerebral masses in a vertebrate animal. . . . The cerebrum coördinates the countless heterogeneous considerations which affect the present and future welfare of the individual as a whole; and the legislature coördinates the countless heterogene-

[1] An Address to the Members of the Midland Institute, October 9, 1871. *Fortnightly Review*, New Series, Vol. X., November 1, 1871, pp. 525–543.

ous considerations which affect the immediate and remote welfare of the whole community. We may describe the office of the brain as that of *averaging* the interests of life, physical, intellectual, moral, social; and a good brain is one in which the desires, answering to their respective interests, are so balanced that the conduct they jointly dictate sacrifices none of them. Similarly we may describe the office of Parliament as that of *averaging* the interests of the various classes in a community; and a good Parliament is one in which the parties answering to these respective interests are so balanced that their united legislation concedes to each class as much as consists with the claims of the rest."

All this appears to be very just. But if the resemblance between the body physiological and the body politic is any indication, not only of what the latter is, and how it has become what it is, but of what it ought to be, and what it is tending to become, I cannot but think that the real force of the analogy is totally opposed to the negative view of state function.

Suppose that in accordance with this view, each muscle were to maintain that the nervous system had no right to interfere with its contraction, except to prevent it from hindering the contraction of another muscle; or each gland that it had a right to secrete, so long as its secretion interfered with no other; suppose every separate cell left free to follow its own "interests," and *laissez faire*, Lord of all, what would become of the body physiological?

The fact is, that the sovereign power of the body thinks for the physiological organism, acts for it, and rules the individual components with a rod of iron. Even the blood-corpuscles cannot hold a public meeting without being accused of "congestion" — and the brain, like other despots whom we have known, calls out at once

for the use of sharp steel against them. As in Hobbes's "Leviathan," the representative of the sovereign authority in the living organism, though he derives all his powers from the mass which he rules, is above the law. The questioning of his authority involves death, or that partial death which we call paralysis. Hence, if the analogy of the body politic with the body physiological counts for anything, it seems to me to be in favor of a much larger amount of governmental interference than exists at present, or than I, for one, at all desire to see.[1]

This criticism of Professor Huxley has never been answered simply because it is unanswerable. Mr. Spencer's subsequent attempt to answer it[2] must be regarded as an entire failure.

This discussion leads to the final aspect of the whole question and the one upon which I would especially insist. It is that the nervous system, instead of being the last to be considered in a comparison of society with an organism, is the first and only proper term of comparison. All the other terms, those upon which Mr. Spencer has laid the principal stress, furnish only "analogies," as he properly calls them. This, on the contrary, furnishes true *homologies*. Analogies are of little use except in arousing and satisfying curiosity, but homologies are valuable aids to the sociologist.

[1] *Loc. cit.*, pp. 534–535. Also: *Critiques and Addresses*, London, 1873, pp. 17–18.

[2] Specialized Administration, *Fortnightly Review*, December, 1871. *Recent Discussions in Science, Philosophy, and Morals*, New York, 1882, pp. 235–279.

The nervous system, as the reservoir of protoplasm and seat of life, sensibility, will, and ideas, is a fundamental factor. Everything in an organism depends upon it. It antedates and has alone made possible all the other systems of an organized body. It controls them all absolutely, and without it the rest would all instantly cease.

What, then, is the result of a comparison of society with an organism from this point of view? Where in the scale of animal development shall we find an organism at the same stage of integration as that which society now occupies? As Professor Huxley shows, the strongest advocate of state control, the most extreme socialist, would shrink from the contemplation of any such absolutism as that exercised by the central ganglion of even the lowest of the recognized Metazoa. In order to find a stage comparable to that occupied by society with respect to the central control of the functions of life it is necessary to go down among the Protozoa and study those peculiar groups of creatures that live in colonies so adapted that while the individuals are free to act as they please within certain limits, they are still imperfectly bound together by protoplasmic threads, to such an extent that they are in a measure subordinate to the mass thus combined, and really act as a unit or body. Between this stage and that of the more or less complete union of these individuals into something analogous to tissue, with a growing differentiation of organs and functions,

all intermediate stages exist, at least theoretically, and the different human societies must be respectively compared with these successive animal stages on this low plane of life.

Looked at from this point of view society may be with much truth regarded as an organism, but it is obviously a very low form of organism. We are thus strikingly impressed with the great relative imperfection of society, and at the same time we are furnished with the means of seeing more clearly than in any other way the true relation of sociology to biology. The sociologist is dealing with an undeveloped stage of a great series of phenomena, and he may well ask himself the question: If such an inchoate being is capable of accomplishing such results as have been accomplished by the social organism, what may we not expect when, under the great law of development operating throughout the organic world, this social organism shall have attained even the lower stages of integration manifested in the humbler animal creatures with which we are all familiar? And when we shrink with a sense of dread from the idea of any such state of social centralization, it is because we fail to realize the possibility of a homogeneous development throughout all the parts of society, including the necessary modification in the character of its individual members, to adapt them to such a régime of subordinate coöperation in the grand scheme. We fail to realize, on the one hand, the possibility of

the central control being absolutely devoted to the welfare of the whole, as the animal consciousness is devoted to the welfare of the animal; and we fail to realize, on the other hand, the possibility of the willing obedience of every individual to the authority of the social centre, for his own good, in the same way that every part of the body willingly submits to the authority of consciousness in its own interests. When we can rise to the position of divesting ourselves of these crude prejudices, due to our narrow range of vision, and our inability to realize that what is now, need not always be, then will it be possible for the student of human society to look forward over the possible future, aided by the light which he receives from looking backward over the known past.

CHAPTER IV

RELATION OF SOCIOLOGY TO ANTHROPOLOGY[1]

ALMOST any subject may be classified in more than one way. Anthropology is the science of man, and taken in its broadest sense it embraces everything that concerns the human race. It first received prominence at the hands of Paul Broca, the eminent student of man in his physical relations. Owing to his influence, it was long restricted to the study of the human body; but so appropriate a term could not be thus bound down, and to-day it has come to receive the broadest meaning of which it admits. The Anthropological Society of Washington, which was founded in 1879, introduced into its constitution the following classification of the science: —

1. Somatology; 2. Sociology; 3. Philology; 4. Philosophy; 5. Psychology; and 6. Technology. These subdivisions were adopted, after prolonged and careful consideration, by such men as Major J. W. Powell, Director of the United States Bureau of Ethnology, Colonel Garrick Mallery, the eminent

[1] *American Anthropologist*, Vol. VIII., Washington, July, 1895, pp. 241–256; *American Journal of Sociology*, Vol. I., No. 4, Chicago, January, 1896, pp. 426–433.

student of sign language and kindred subjects, and Professor Otis T. Mason, Curator of Ethnology for the United States National Museum. It has been found during nineteen years' experience that every subject proper to be brought before the Society could be classed under some one of these heads.

Here, as will be seen, sociology is made a subdivision of anthropology, and properly so; but this does not in any way invalidate an entirely different classification in which sociology is made the generic science, and anthropology is looked upon as in some sense a part of sociology. It all depends upon the point of view. As man is the being with whom sociology deals, that science, of course, belongs to the science of man; but if we look upon sociology as embracing everything relating to associated man, a large part of the facts and phenomena of anthropology overlap upon its domain, and it becomes important to consider the relations subsisting among these phenomena. Moreover, the phenomena of association are not exclusively confined to man. Sociologists are coming to pay more and more attention to phenomena among animals analogous to those displayed by men, and animal association is a well-known fact which is receiving increased attention; so that sociology is not wholly included in any view of anthropology.

But when we examine the two sciences closely we perceive that they differ generically. Anthropology, in dealing with man — *i.e.*, with a particular being

or species of animal — is primarily a descriptive science. It is not concerned with laws or principles, but with material facts. Sociology, on the contrary, deals primarily with association and whatever conduces to it or modifies it. But association is not a material thing; it is a condition, and the science that deals with it is chiefly concerned with the laws and principles that produce and affect that condition. In short, while anthropology is essentially a concrete science, sociology is essentially an abstract science. The distinction is very nearly the same as between biology and zoölogy, except that anthropology is restricted to a single species of animal. Thus viewed, it is clear that it becomes simply a branch of zoölogy with classificatory rank below ornithology, entomology, mammalogy, etc. There is no other single species or even genus that has been made the subject of a distinct science, as might obviously be done — *e.g.*, hippology, the science of the horse, or cynology, the science of the dog.

It comes, however, wholly within the province of social philosophy to inquire into the nature of this being, man, whose associative habits form the chief subject of sociology. First of all, his position in the animal world needs to be understood. No possible good can come from ignoring the true relations of man to the humbler forms of life around him, while, on the other hand, if this relation is correctly understood, it furnishes one of the principal means

by which man can learn to know himself. Accepting, therefore, the conclusions of the masters in zoölogy, among whom, as to the main points, there are no longer any differences of opinion, we must contemplate man simply as the most favored of all the "favored races" that have struggled up from a remote and humble origin. His superiority is due almost exclusively to his extraordinary brain development.

Very few have seriously reflected upon the natural consequences of this one characteristic — a highly developed brain. Without inquiring how it happened that the creature called man was singled out to become the recipient of this extraordinary endowment, we may safely make two fundamental propositions, which tend to show that this question is not as important as it seems. The first is that if the developed brain had been awarded to any one of the other animals of nearly the same size of man, that animal would have dominated the earth in much the same way that man does. The other is that a large part of what constitutes the physical superiority of man is directly due to his brain development.

As to the first of these propositions, it is true that man belongs systematically to the highest class of animals, the placental Mammalia. It would have looked somewhat anomalous to the zoölogist if he had discovered that the dominant race to which he belonged must be classed below many of the creatures over which he held sway, as would have been the

case if the organ of knowing had been conferred, for example, upon some species of large bird or reptile; but in fact something a little less anomalous, but of the same kind, actually occurs. The line along which man has descended is not regarded by zoölogists as by any means the most highly developed line of the mammalian class. It is a very short line and leads directly back through the apes and lemurs to the marsupials and monotremes, animals of much lower systematic order, the last named forming a partial transition to birds. Most of the other developed mammals, such as the Carnivora and Ungulata, have a much longer ancestry, and have really attained a far higher stage of development. In the matter of digits it is maintained that true progress is characterized by a reduction in their number, and that the highest stage is not reached until they are reduced to one, as in the horse. In this respect man is a slight advance upon the apes in having lost the thumbs of his feet. No one can deny that the power of flight would have been an immense advantage to man, yet few mammals possess this power, and it is chiefly confined to creatures of low organization.

It is difficult to conceive of a being entirely different in form from man taking the place that he has acquired; but if any one of the structurally higher races possessed the same brain development it would have had the same intelligence, and although its achievements would doubtless have been very different from his, they would have had the same rank

and secured for that race the same mastery over animate and inanimate nature. This will become clearer when we consider the second of the above propositions, which we may now proceed to do.

To what extent has brain development reacted upon man's physical nature? I cannot, of course, go fully into this question here, but nothing is better known to anatomists than that the erect posture is not the natural or primary one. It has been acquired by man within comparatively recent time. It is a legitimate inference that it is chiefly due to brain development: physiologically as a means of supporting the enlarged and correspondingly heavier head, which it would be difficult to carry in the horizontal position, and psychologically as the natural result of a growing intelligence and self-consciousness, which seeks to lift the head and raise it to a position from which it can command its surroundings. It is a common observation that those persons who possess the greatest amount of self-esteem stand straightest, and it is this same principle that has operated from the beginning to bring the human body more and more nearly into a vertical position.

Pari passu with this process has gone on the diminution of the craniofacial angle. The same influences that tended to raise the body from the horizontal to the vertical position tended also to carry the brain and upper part of the face forward and the jaws and mouth backward. It is not claimed that this reaction of the developing intelligence upon

the physical form is sufficient alone to account for the development of the entire type of physical beauty attained by the most advanced human races. Æsthetic considerations are needed to complete the process, and especially the powerful aid of sexual selection; but even the sense of beauty must be in great part ascribed to mental increase and refinement.

Nothing is more certain than that the faculty of speech is a product of intelligence. Both by direct effort and by hereditary selection the organs of speech received increment after increment of adaptation to this end. The means of intercommunication was the indispensable requirement, and this would be secured by any intelligent creature, no matter what the physical organization might be. Oral speech is by no means the only way in which such intercommunication is secured, and even if no organs had existed by which sound could be produced, some other means would have been adopted. But man possessed sound-producing organs in common with nearly all animals. There is no evidence that he was specially favored in this respect. In developed man the larynx is more complicated than in most mammals; but this may be comparatively recent. In many animals it is greatly specialized. In birds it is far more elaborate than in man, being double and sometimes, as in the crane, enormously elongated and coiled into a trumpet. Who can doubt that with such an organ all birds could talk if they possessed ideas to communicate? The parrot and many

other birds actually do distinctly articulate the words of human speech by imitation, but they lack the power to clothe them with thought. It would be easy to add a great number of other proofs of the all-sufficiency of the one leading characteristic of the human species — his superior brain development — to account for all the important features that distinguish him from the lower animals, but those already mentioned must suffice in this place.

Before leaving the general subject of the relation of man to the lower animals, it may be well to inquire more specifically into the qualities that are alleged to be distinctively human. As sociology deals chiefly with man, it is desirable to arrive, as nearly as possible, at a correct idea of what man is — not the loose conventional idea which, as we have just seen, is not only crude but in great degree false — but a true and fundamental idea, based on attributes that are not superficial, but that lie deep in his essential nature. Even if we are obliged to conclude that there is no direction in which man's superiority is not quantitative rather than qualitative, — *i.e.*, a matter of degree rather than of kind, — it will be worth while to consider this difference of degree. There are no hard and fast lines in nature, and the greatest leaps that seem to have been taken in cosmic evolution are such only when statically considered, and blend together when viewed in their dynamic or historical aspects.

Nothing is more frequently met with in literature than the statement that some particular quality under consideration constitutes an essential distinction between man and the lower animals. I have for many years been accumulating such statements, most of which readily yield to analysis. A few, however, are worthy of serious consideration, and we shall see whether the claim that there exists anything distinctively human can be regarded as established. It is difficult to classify all these alleged distinctively human attributes in any logical order. I shall exclude, except in their collateral bearings, all physical differences and confine myself to those which can be called mental in the broad sense of the word. Thus circumscribed the natural subdivision would seem to be into affective and intellectual qualities; but in attempting such a subdivision I encounter many difficulties arising out of the interaction of these two great departments of the mind. Indeed, from what has already been said, it is obvious that the great distinction is intellectual, and that the developing intellect has reacted alike upon the physical form and the nervous system (sensory and emotional apparatus). If I were simply continuing the preceding argument and seeking to show that increased brain development is adequate also to account for observed psychic modifications I should, of course, reverse the order here employed; but that would perhaps be too much to prejudge the case. I shall therefore consider the lower facul-

ties first and endeavor to rise successively in the scale.

One of the most modest claims is that of Comte, that it is only in man that we find the purely vegetative functions of life subordinated to the distinctively animal functions. The lower animals and, as he admits, the lowest types of men, according to this view, simply vegetate — *i.e.*, they do nothing but live — while the higher types of men not only live, but live for something, are conscious of living, which, he says, is the noblest conception we can form of humanity as distinct from animality.[1]

It is easy to see that he here refers to feeling as an end of life, but the same logic which prevents him from recognizing psychology as distinct from biology debars him from saying this in so many words.

Man is said to be the only animal that laughs, and if we restrict laughter to the modifications made in the facial muscles, this distinction is one of the most complete of all that have been insisted upon. But every one knows that the eye is strongly expressive of the sense of amusement, and certain animals, as the dog, express emotions with the eye that are closely akin to mirth. But men laugh from a number of motives, among which are joy and gladness, and it is these last that animals chiefly manifest. The psychologic basis of wit and humor is something very different from this, and belongs to the intellectual group of characteristics.

[1] *Phil. Pos.*, 3e éd., 1869, Vol. III., p. 494.

Crying, in the sense of a vocal manifestation of the sensation of pain, is, of course, common to man and most of the higher animals. Reptiles, and even fishes, also occasionally utter such sounds; but in the sense of weeping, usually accompanied by the shedding of tears, crying is as exclusively a human attribute as laughing. Schopenhauer, than whom no one has more acutely analyzed the mind, denies that we ever weep from the pain experienced, but only from its "repetition in reflection," and he defines weeping as "sympathy with one's self or sympathy reflected back upon its source."[1]

Sympathy proper — *i.e.*, sympathy for others, to which the last remark seems to lead — is certainly not an exclusively human affection. While it may be a question whether the defence of their young by nearly all animals is anything more than an instinct developed through natural selection for the protection of races, neither is it certain that the same instinct manifested by the human mother rises far above this. The pure article is therefore to be looked for between individuals that are not bound together by such powerful ties of interest; but there are many accounts of what seems like genuine sympathy on the part of dogs, and it is even less doubtful in the case of monkeys.

Sympathy, as the word implies, is a real though representative feeling, usually painful, and consists of a "realizing sense" of suffering in another being.

[1] *Welt als Wille u. Vorst.*, Leipzig, 1859, Vol. I., p. 445.

There are two prerequisites to the existence of sympathy, viz., the experience of a similar pain to the one sympathized with, and the power of recalling the sensation experienced. Still another condition might be added, which is distinct from these. The creature sympathizing must be able to derive from the facts observed an idea that the creature sympathized with is suffering pain. This last condition is a form of reasoning, while the remembrance of past painful states requires some degree of perfection in the structure of the brain. It is not therefore to be wondered at, that only the highest animals are capable of manifesting sympathy.

The question whether sympathy increases with intelligence has been much discussed. To those who hold that it does so increase, it has been answered that among enlightened people it is not the most intelligent who manifest the most sympathy; that philosophers and wise men are often not sympathetic, while many women not possessed of abundant wisdom are intensely so. I have never felt that this was a sufficient answer, and if this were the proper place I would attempt to point out its fallacies; but as it does not directly bear upon the question of sympathy in animals, it must suffice to refer to the patent fact that altruism has steadily increased with the progress of civilization — *i.e.*, true sympathy is almost directly proportional to intelligence.

The quality which is of course most frequently referred to as peculiar to man is what is commonly

called the moral sense. It is believed by many that man possesses a special faculty by which he can unerringly distinguish right from wrong. This, of course, represents a crude stage of philosophy, in which observation plays no part. But some very respectable philosophers have maintained that there is an abstract right and wrong which may be known and upon which a science of pure ethics can be based. Not to speak of Kant's rather obscure statement of this doctrine, it is worth noting that Herbert Spencer set out from this point of view and defended it in his *Social Statics*, but in his later works repudiated it as not sustained by the great body of facts that he had gleaned from the history of all races.

Paley maintained that the power to distinguish good from evil grew out of the expectation of reward and punishment, and Darwin has shown that the moral sense as thus defined certainly belongs to some of the higher animals. In most civilized men the "categorical imperative" is so strong that it is no wonder that it should be regarded as a special endowment of human nature; but every one knows in his own experience with the world that there are many fully civilized men who lack the ethical sense on certain subjects, even though it may be fully developed as regards all others. Who, for example, does not know certain persons who make it a principle of life never to surrender money until compelled, whatever may be the obligation to do so? The saying that "if you wish to make an enemy of a friend,

lend him money" is based on the common observation that a full moiety of mankind consider it a hardship to have to return money that they have borrowed and used without giving any equivalent. This is only one of a long list of bad traits in human nature, these being simply cases in which the ethical sense is not fully developed. So prevalent is this that it is a common remark that one only occasionally finds a person who is thoroughly upright in all matters. There is a "screw loose" somewhere in almost every one, so that it is considered necessary to praise one who always does as he should do.

Bishop Whately strikes the keynote in the parenthetical part of the following remark: "The moral faculty, or power of distinguishing right from wrong, (which appears also to be closely connected with abstraction, without which it could not exist) is one of which brutes are destitute."[1]

It is probably true that brutes are destitute of the power to represent the pains of others to any great extent, and it is this power that forms the basis of the moral sense; yet I have myself frequently observed in the case of dogs which I knew had never themselves been shot, but had seen many other animals killed and wounded by shooting, that they always recoil when a gun is pointed at them. They certainly must *conclude* that the gun if discharged when pointed at them will produce the same effect on them that it does on other animals. There is no

[1] *Logic*, Appendix No. 1, § xxiii., American edition, 1854, p. 253.

room for instinct or automatism here, and I cannot doubt that they actually represent to themselves the pain that they see wounded animals manifest. What impressions they may derive from the frequent sight of animals thus rendered lifeless is only a matter for speculation, but there is no doubt that one of the first facts about which a dawning intellect would reflect is death.

We may next consider the faculty of volition. Says Dr. Carpenter: "Whilst we fully recognize the possession by many of the lower animals of an intelligence comparable (up to a certain point) with that of man, we find no evidence that any of them have a volitional power of *directing* their mental operations at all similar to his."[1] It is not, of course, denied that animals possess will and are governed by it in their actions, but it is supposed that man has a power, not possessed by them, of deciding among many conflicting motives which one to obey. This need not necessarily involve the acceptance of the doctrine of free will in the popular sense. Schopenhauer, who, while defending a form of that doctrine, denies the *liberum arbitrium indifferentiæ*, remarks: —

> Although animal and man are determined with equal necessity by motives, man possesses over the animal a perfect power of choice (Wahlentscheidung), which is often regarded as a freedom of the will, although it is

[1] *Mental Physiology*, p. 105.

nothing but the possibility of a fully fought out conflict between several motives, of which the strongest necessarily determines his act.[1]

A discussion of the question of free will would obviously carry me much too far afield; but there is one aspect of this question which is so important and so little insisted upon that it may appropriately receive mention. I will introduce it by quoting a passage from that acute thinker, Professor Joseph LeConte. He says:—

> There are four planes of matter raised one above the other: 1. Elements; 2. Chemical compounds; 3. Vegetables; 4. Animals. Now, there are also four planes of force similarly related to each other, viz., physical force, chemical force, vitality, and will. . . . With each elevation there is a peculiar force added to the already existing, and a peculiar group of phenomena is the result. As matter only rises step by step from plane to plane, and never two steps at a time, so also force, in its transformation into higher forms of force, rises only step by step. Physical force does not become vital except through chemical force, and chemical force does not become will except through vital force. . . . I might add still another plane and another force, viz., the human plane, on which operate, in addition to all the lower forces, also free will and reason.[2]

This just and luminous conception I have myself elaborated in an article on "The Natural Storage of Energy."[3] Its application here is this: Every

[1] *Welt als Wille*, Vol. I., 350–351.
[2] *Pop. Sci. Monthly*, Vol. IV., p. 167.
[3] *The Monist*, Vol. V., pp. 247–263.

creature, including man, is undoubtedly determined by this concourse and storage of forces, and in this sense a man's acts are indeed products of his constitution; but it is possible to abstract all these antecedent agencies and contemplate man solely with reference to the future. Looked at for just what he is, regardless of how he became so, he appears as a source of independent energy, and in this sense his will is free. But this helps us little to distinguish the human from the animal will, for, except in the degree of this initiative power, the same seems to be true of the one as of the other. Dr. Carpenter attempts to draw the line between children and adults; but this is obviously to beg the question, since no age can be fixed at which any wholly new power is added.

The last of the affective faculties to be considered is the sense of beauty. Have animals any æsthetic sentiments? Half a century ago this question would have received an almost unanimous negative answer. To-day every well-informed person knows that the true answer is an affirmative one. The two great facts of sexual selection among animals and the cross-fertilization of flowers by insects have abundantly shown that nearly or quite all living creatures have tastes and admire certain forms and colors. Not only is this so, but, while the tastes of animals, like those of men, differ widely, there is a general standard which is substantially the same for both. The ostrich feathers, which are the admiration of the

social world, are the products of a sense of beauty in the ostrich. The peacock, the pheasant, and the bird of paradise owe their beauty to sexual selection. The antlers of the stag, that can engage the attention of a Landseer, are secondary sexual characters, utterly useless except as pure ornaments with which to win the favor of mates that have created them by withholding their favors from those in which these ornaments fell below their ideals of beauty. And what is considered more beautiful than flowers? Yet every flower is an expression of some insect's ideal of beauty; otherwise it could never have come into existence. Paleontology teaches that plants with showy flowers appeared on the earth simultaneously with nectar-seeking insects; and the more we study the flowers and insects now living, the clearer it becomes that the same process is still going on, determining size, form, color, and fragrance.

But, it may be said, man is the only creature that artificially adorns himself. M. de Quatrefages has laid great stress on this fact, and deservedly so, for, although he did not understand it, this involves one of the most important principles of both anthropology and sociology. The principle is none other than the one upon which I have so often insisted, that the environment transforms the animal, while man transforms the environment. Though it is much broader in its scope, we may here restrict it to the æsthetic sense. Both animals and men possess this sense. The former satisfy it by acts which, in

the course of generations, produce physical modifications in their organic structure. The latter, unwilling to wait the slow process of organic change, create the objects of their admiration. Bodily ornamentation is probably the earliest form in which the æsthetic sense of man found expression. Strange, grotesque, absurd, and even injurious as this form of art has been in its rudest stages, it is still the product of man's efforts to satisfy whatever sense of beauty he possessed. In the course of its development it at last assumes the form of fine art, and is extended beyond the body and carried into all the great fields of natural beauty. Says Professor Huxley: —

> Among the many distinctions which have been drawn between the lower creatures and ourselves, there is one which is hardly ever insisted on. . . . It is this, that while, among various kinds of animals, it is possible to discover traces of all the other faculties of man, especially the faculty of mimicry, yet that particular form of mimicry which shows itself in the imitation of form, either by modeling or by drawing, is not to be met with. As far as I know, there is no sculpture or modeling, and decidedly no painting or drawing, of animal origin.[1]

This is all very true, and it certainly constitutes one of the most trenchant distinctions between men and animals. Its explanation is not far to seek. Having now passed in review all the more important affective attributes, we may next proceed to examine those which belong to the intellectual side of man's

[1] *Science and Education Essays*, London, 1893, pp. 276–277.

nature, in the hope that they may furnish the key to the various questions involved in the class already considered.

First and foremost among these stands the attribute of rationality. Do animals reason? This is the old question, and it must be frankly admitted that the answer which flows from all the facts is an affirmative one, at least so far as concerns the most highly developed animal races, especially those that have been longest associated with man, as the dog and horse. Rats, too, which must constantly scheme to escape from man, are exceedingly sagacious. But such wholly wild animals as wolves show scarcely less intelligence, and the wisdom of the elephant is proverbial. Length of life seems to have much to do with it, and to show that acquired experience is utilized as it is by man. Now, if we look over the whole field we find that the several affective attributes above enumerated and numerous others chiefly confined to man, but faintly displayed by certain animals, are confined and ascribed to the same animals that are believed to exhibit the beginnings of reason. Is there a causal connection between the two? I maintain that there is, and that the possession of the affective powers is the direct consequence of the corresponding power of reason. In nearly every case I have discussed I have carried it to the point where this hypothesis not only would apply, but seemed necessary to complete the explanation. We saw that sympathy and the moral sense

in general depends absolutely upon a power of representation sufficiently strong to react upon the centres of feeling, and this representative power is purely intellectual. We saw that volition, to rise at all above the mere animal impulse, depended upon a power of choice between motives, which is nothing else than to say that foreseen future or remote benefits influence action more strongly than immediately present ones. This, again, is a form of reason. And finally we saw that artistic production depends upon the power to frame and execute an ideal, and therefore has entirely to do with ideas as distinguished from the mere feelings which actuate the lower animals.

In my *Psychic Factors*, Part II., I have endeavored to set forth the manner in which the rational faculty took its rise, primarily as an aid to the will in better securing the ends of existence, and have then followed its progress through its incipient stages and onward in its remarkable development until it wholly lost sight of this original egoistic function and became the servant of humanity in general, even to the sacrifice of self. And it is in these higher stages that we find the most marked cases of purely human powers — powers of which animals, even the highest, scarcely manifest a rudiment. Language, properly so called, consists of symbols for things, actions, and relations, and these are all rational abstractions. Every name or common noun is an embodied idea and may embrace any number of individuals. It

is doubtful whether any animal could perform the mental operation required in saying dog, horse, mountain, river. All the nouns in an animal's language would be proper nouns, the names of particular dogs, horses, mountains, and rivers. The same would be true of verbs. Indeed, the ruder human languages show a tendency in this direction. The word *go* is a very abstract term, and certain Indian languages have no such word. All verbs of going must specify the manner of going, as to go-over-the-mountain, to go-to the river, to go-on horse-back, etc. — *i.e.*, early languages, for want of the power of abstraction on the part of the people possessing them, become *holophrastic*. Such people speak in phrases instead of words. This idea might be followed out much further.

After language, which is itself an art, we find man developing other arts, not merely the arts of decoration, already considered, but the arts of self-protection and self-preservation. These depend on inventive power, which, though wholly rational, is a power very early developed. Art of every kind is exclusively human. Man is the only creature who uses tools. The tools and weapons of all animals are a part of themselves, and are genetic products; those of man are part of their environment, and are mechanical products. Everything that pertains to culture is of this last class. Civilization is exclusively artificial and exclusively human. Art is essentially teleological — *i.e.*, it is a product of

design — and there is no evidence that animals possess this faculty. Many of the lower creatures do indeed lay in stores for the future, but it is always the result of an instinct genetically developed as a condition to survival. Clustering round this idea of prevision there is a large class of phenomena which seem to be especially human. Besides purpose, intention, and provision, there are the states known as anticipation, ambition, and aspiration, which all grow out of the power to forecast the future. It is not believed that the lower creatures live in the future in any such sense. They have their wants, even yearnings, no doubt, and they have expectations, and perhaps hopes, but they have no anticipations in the sense of feeling the pain or pleasure of experiences that are not present. This is a representative power which is wholly intellectual. Men really both suffer and enjoy more in anticipation than in participation. Imagine the criminal condemned to death, or, to take a simpler case, think how much of the pain of a surgical operation is due to the antecedent realization of what must be undergone. It is the same with enjoyments, not merely the simpler physical ones, but especially the remote mental ones, and the sacrifices of a long and laborious life are cheerfully made in anticipation of the foreseen results.

Self-consciousness is often referred to as a distinguishing characteristic of man. Many, however, fail to gain a clear conception of what this faculty

is. Dr. Carpenter confounds it with the "power of reflecting on their own mental states,"[1] while Mr. Darwin associates it with abstraction and other of the derivative faculties. It is certainly something much simpler than introspection, and has an earlier origin than the highly derivative speculative faculties. If it could only be seized and clearly understood, self-consciousness would doubtless prove to be the primary and fundamental human attribute. Unlike reason, it has no roots in the animal stage; but neither do all men possess it. Our language seems to lack the proper word to express it in its simplest form. "Think" approaches this most nearly, and man is sometimes described as a "thinking being." The German language has a better word, viz., *besinnen*, and the substantive *Besonnenheit* seems to touch the kernel of the problem. Schopenhauer says: —

> The animal lives without any *Besonnenheit*. It has consciousness — *i.e.*, knows itself and its weal and woe; also the objects which produce these; but its knowledge remains constantly subjective, never becomes objective: everything that it embraces appears to exist in and of itself, and can therefore never become an object of representation nor a problem for meditation. Its consciousness is thus wholly immanent. The consciousness of the savage man is similarly constituted in that his perceptions of things and of the world remain preponderantly subjective and immanent. He perceives things in the world, but not the world; his own actions and passions, but not

[1] *Mental Physiology*, p. 102.

himself. As, now, through infinite gradations the light of consciousness rises, *Besonnenheit* enters more and more into it, and thus it gradually comes about that occasionally, though rarely, and with very different degrees of clearness, the question flashes through his head, "What does it all mean?" or, "How has it been brought about?" The first question, when it attains great clearness and persistency, makes the philosopher; the second, the artist or poet; and thus the high calling of both these has its roots in the *Besonnenheit*, which first of all springs from the clearness with which they become conscious of the world, and are thereby led to the contemplation of it. But the whole process is due to the intellect gaining the ascendant and at times breaking loose from the will, whose servant it originally was. (*Op. cit.*, Vol. II., pp. 435, 436.)

This self-orientation or incipient reflection is thus seen to be something quite different from self-consciousness in the usual sense. It is not so much self as it is the outside world of which the intellect becomes conscious. It is not a subjective but an objective phenomenon, and in so far as self is concerned, it is objectively contemplated as part of the world. This early intellectual state is succeeded by those higher powers of introspection, speculation, reflection, abstraction, and generalization which characterize the developed mind of man, and all this is accompanied by the general differentiation of the faculties and refinement of the mental and moral organization of the race. Among the more important of these powers are those of creating new wants and of increasing the supply necessary to satisfy

them. No animal accomplishes this. The animal's wants are adjusted by the slow process of adaptation to the sources of supply, and even when these wants are all supplied it is not probable that any higher ones arise. Not so with man. The moment the coarser and more essential physical wants are supplied he feels new ones, both physical and mental, arise, and he proceeds to supply these.

To what extent the fact of association has been a factor in producing this last fundamental difference between men and animals is one of the leading questions in sociology. For my own part, I am disposed to attribute it, directly or indirectly, almost wholly to this cause.

The last question to be discussed is whether there is any generic distinction between human and animal association. Many animals are gregarious and some lead a truly social life. We all know how most domestic animals love to mingle with their kind. The horse is an exceedingly social animal and is always uneasy and apparently unhappy until in the presence of other horses. Most ungulates, even in the wild state, go in flocks and herds. It is noteworthy that herbivorous animals are more gregarious than carnivorous ones. Animals of the cat tribe are scarcely at all so. Wolves, it is true, go in packs, but it may be a question whether this is not entirely due to the advantage this gives them in attacking their prey, which is often an animal of nearly their

own size, as the sheep. Many birds live in flocks, sometimes, as pigeons, of immense numbers. Fishes, too, form "shoals," and insects swarm.

The causes of all these forms of gregariousness are numerous and complex. The necessities of reproduction are sufficient to account for a large part of it, and all animals must associate enough to secure this end. One of the most curious facts is that those animals which zoölogists place nearest to man are not among the most gregarious. The habits of apes and monkeys in the wild state are not as well known as could be wished in discussing this question, and although some of the anthropoid apes are known to go in troops, though not very large ones, still this class of animals can scarcely be regarded as gregarious. Although it is admitted that none of the living forms could have been the immediate ancestor of man, and therefore there will always remain the possibility that his true simian ancestor may have been a gregarious animal, still the probabilities are against this view, and it seems likely that throughout his purely animal career man possessed the associative habit only so far as was necessary for the maintenance of the race.

Considering all these facts, I am inclined to the view that man is not *naturally* a social being, that he has descended from an animal that was not even gregarious by instinct, and that human society, like so many other facts that I have been enumerating, is purely a product of his reason and arose by insensible

degrees, *pari passu* with the development of his brain. In other words, I regard human association as the result of the perceived advantage which it yields, and as coming into existence only in proportion as that advantage was perceived by the only faculty capable of perceiving it, the intellect. In Dynamic Sociology I took strong ground against the Aristotelian idea that man is a gregarious animal and the Comtean doctrine that he is by nature a social being, and pointed out a large number of what I called "anti-social" qualities in his nature,[1] and I also worked out what I conceived must have been the several steps which the race has taken in its passage from the purely animal state to the developed social state.[2] I do not adhere to that position now merely because I assumed it then, but rather because, notwithstanding the little real evidence, subsequent indications have tended to confirm it. I will here emphasize only one point. Human government is an art only possible in a rational being. No animal possesses a government in any such sense. The primary object of government is to protect society from just these anti-social influences, and it is generally admitted that without it society could not exist. This means that even in the most enlightened peoples the anti-social tendencies are still so strong that they would disrupt society but for an artificial system of protection. To call man of whom this can be said

[1] See Vol. I., pp. 394, 452, 462, 474; Vol. II., pp. 212, 221.
[2] Vol. I., p. 466.

a social being by nature is obviously absurd. No doubt strong social impulses exist among men, but they are the product of ages of constraint. Man may be in process of becoming a social being, but he will not have really become such until it shall be possible to dispense entirely with the protective function of government. Universal education and further centuries of custom may ultimately transform human character to this extent, until habit shall become at least a second nature and accomplish the same result that natural selection has accomplished in making gregarious animals and social insects; but thus far society, which is the product of the collective reason working for its own interests, is still dependent upon the momentary exercise of that reason in preventing its own overthrow.

It is for these reasons that I am obliged to maintain that human society is generically distinct from all animal societies. It is essentially rational and artificial while animal association is essentially instinctive and natural. The adaptation in the former is incomplete, while in the latter it is practically complete. Hence the same principles do not apply to human and animal sociology. The latter is essentially a biological study, and while psychological considerations are potent in both, those that belong to animal sociology relate exclusively to feeling while those that belong to human sociology relate chiefly to the intellect. The facts of animal association therefore — the remarkable resemblances to

man's ways displayed by insects and the curious imitations of human customs in various departments of the animal world — prove to be only *analogies* and not true homologies, and as such have much less value to the sociologist than they appear at first view to possess.

CHAPTER V

RELATION OF SOCIOLOGY TO PSYCHOLOGY[1]

In our efforts to fix the true position of sociology we have now considered its relations to cosmology, biology, and anthropology. It remains to consider its relations to psychology. The founder of sociology placed it next above biology in the scale of diminishing generality and increasing complexity, and maintained that it had that science as its natural basis and as the substratum into which its roots penetrated. Herbert Spencer, although he treated psychology as a distinct science and placed it between biology and sociology in his system of Synthetic Philosophy, made no attempt to affiliate sociology upon psychology, while, on the contrary, he did exert himself to demonstrate that it has exceedingly close natural affinities with biology, as was shown in the third chapter. At the close of that chapter the fact came clearly forth that almost the only legitimate comparisons between society and a living organism were those in which the nervous system was taken as the term of comparison. In other words, it was clear even then that the class

[1] *American Journal of Sociology*, Vol. I., No. 5, Chicago, March, 1896, pp. 618–632.

of attributes in the individual animal with which those of society could best be compared were its psychic attributes. If we are to have a science of psychology distinct from biology, these attributes belong to that science, and hence it is really psychology and not biology upon which sociology directly rests. I hope to show the importance of this truth both from the purely logical and also from the wholly practical side.

Psychology, as the science of mind, embraces the entire field of psychic phenomena. This field is not restricted to the purely intellectual operations which have formed the exclusive subject of philosophy until a quite recent date, nor even to the more enlarged field of the senses and the intellect embraced in more modern works; it reaches out and gathers to its fold that other, not merely neglected but generally despised, field variously called the passions, the affections, and the emotions. In short, everything which is not clearly a vital attribute — is not exclusively concerned in furthering the functions of life — must belong to mind and form a part of psychology. The subdivision of mind which I prefer is that into sense and intellect, using the word sense as synonymous with feeling in general. But as most forms of intellection may be regarded as modes of thinking, it is sometimes clearer to draw the antithesis between *feeling* and *thought*. But as adjective forms are convenient and as all feelings are in the philosophical sense *affections*, it often

strengthens the conception to refer to the feelings in this general sense as constituting the *affective* side of mind, or the affective faculties. Similarly, as all intellectual processes grow out of the primary process of perception, it is sometimes convenient to designate these as constituting the *perceptive* side of mind. From still another point of view the science of psychology may be divided into *subjective* and *objective*. Affective phenomena relate exclusively to the subject and yield no notion of the object, while perceptive phenomena have for their primary function to acquaint the subject with the qualities of the object. We thus have the two great fields of subjective and objective psychology.

But it matters not what terms we use, the distinction is always the same and should be rigidly adhered to. It is much confused in modern discussions, and the word mind, which formerly always meant the operations of the intellect only, has come in recent times to be used in the sense of feeling only, the thinking process itself being described as a form of feeling. There is a sense in which this cannot be denied, for without feeling there could be no consciousness; still the subjective process, feeling, can be distinguished from the objective product, knowledge, and the two fields kept apart.

Mind is of biological origin. Feeling was first developed under the operation of the law of survival for the protection of plastic organisms, taking the

positive form of pleasure to induce them to seek nourishment and reproduce their kind, and the negative form of pain to induce them to escape enemies and other dangers. These were sufficient for all the lower forms of life and constitute almost the only form of psychic manifestation below the human stage. With man, however, and, in an embryonic form in some of the higher animals, a new element was introduced, first exclusively as an aid to the will, which is the active expression of the affective powers. This was the perceptive element, by means of which the ends of being were rendered more secure, and the creatures in which it was most highly developed became the winners in the race. Man proved to be the specially favored of all the earth's inhabitants in this most important respect, and was thus enabled to become not only master of all other life, but of the physical forces of nature as well.

Although, as was shown in the last chapter, the intellect, as the result of superior brain development, is the one leading attribute that distinguishes the human race from all other races and constitutes man, still, it was not developed at the expense of, or as a substitute for, his affective faculties, but *pari passu* with them and as an aid to them. It is therefore clear that it is these affective attributes that hold the first place and constitute that to which all others are subservient. Intellect is not an end in itself. It is only a means to the end. The end itself is the *good*. If life be considered desirable, the preserva-

tion and continuation of life must be looked upon as a good. But closer analysis shows that even this may, from a certain point of view, be regarded as a means. The good itself is distinct from it. We are thus met by the necessity of making a broad distinction which is of the utmost importance to sociology. The biological must be clearly marked off from the psychological standpoint. The former is that of *function*, the latter that of *feeling*. It is convenient and almost necessary, in order to gain a correct conception of these relations, to personify Nature, as it were, and bring her into strong contrast with the sentient creature. Thus viewed, each may be conceived to have its own special end. The end of Nature is function, *i.e.*, life. It is biological. The end of the creature is feeling, *i.e.*, it is psychic. From the standpoint of Nature, feeling is a means to function. From the standpoint of the organism, function is a means to feeling. Pleasure and pain came into existence in order that a certain class of beings might live, but those beings, having been given existence, now live in order to enjoy. This enjoyment of life, which we may say was not contemplated by Nature, or to use Weismann's expression, was "unintended," and which forms no necessary part of the general scheme of Nature, becomes, once it has been introduced, the sole end of the beings capable of it. As Nature cares nothing for their enjoyments and is indifferent to their sufferings, so they in turn care nothing for her great scheme

of evolution, and would not make the smallest personal sacrifice to further it. Yet, from the very manner in which this new element came into the world, this single pursuit of their own good proves to be that which could alone secure the success of Nature's scheme. Pleasure means life and pain means death. This new element is nothing more nor less than the *moral* element. No such element exists in Nature outside of this class of beings. Nature is wholly *unmoral*. The moral world is a comparatively restricted one. It is confined exclusively to animal life, including, of course, human life. Yet it is not to be despised. To Nature at large it is nothing. To the sentient world it is everything. Man belongs to that world and it is everything to him. Only it is needful that he should recognize that it is no part of the scheme of Nature except accidentally, or at most incidentally. The realization of this truth is calculated to teach him that modesty which is essential even to his own welfare. The prevalent view that ethics is a vast system coextensive with the universe belongs to that class of vainglorious conceptions that make up the anthropocentric philosophy of the pre-scientific period and of the uninformed generally, and tends, like all crude and vaunting ideas, to render men arrogant and intolerant. But having said thus much, it is necessary to recognize also that sociology has no other course left than to proceed upon the assumption that the good is everything.

Now the good, at bottom, is nothing else than agreeable sensation as it was developed for the preservation of life. Those who are in the habit of regarding this as trifling or unworthy do not consider, usually do not know, that this was the only way by which the scheme of Nature could be carried out. Without it, not only could man never have come into existence, but there could have been nothing in existence higher than the vegetable. This agreeable sensation, which early takes the form of pleasure, possesses every conceivable degree, not merely of intensity or pitch, but also of quality or timbre. It is all in itself good. It is *the* good. All pleasure is not only good but right, if it results in no harm. But to result in harm is simply to deprive of pleasure, so that the proposition is correct in its simple form if we give the right meaning to words. But in consequence of these degrees in the intensity and quality of pleasures, everything becomes relative, and morality is reduced to choosing among pleasures those which are best. Here, again, the primary principle applies. *Best* is the superlative of *good*, and the good is pleasure. So the best is the greatest pleasure. The ethical end is to secure the maximum absolute enjoyment. No one would question these statements if they were applied to animals. They are equally true of men, and philosophers simply deceive themselves when they deny them and seek to bring in some foreign element. What they do is wrongly to limit the term pleasure

to the coarser, sensual forms and deny its applicability to the higher, spiritual forms. But the two pass insensibly into each other and no line can be drawn that will completely separate them. They are all good in themselves and some only seem bad relatively to others. The least refined pleasures are, in fact, the most essential. They are most closely connected with function. They were the first developed and served, as they will always serve, their purpose in carrying out the scheme of Nature — the preservation, increase, and continuation of life. If possible, therefore, they have an even higher sanction than the more refined pleasures, which do not serve to the same extent, if at all, the disinterested ends of Nature, and exist far more for their own sake, egoistically. This shows clearly that the problem of ethics is to secure the greatest pleasure. It is discovered that the higher, spiritual pleasures are the most enduring. Although they may lack something of the intensity of the other class they much more than counterbalance this loss by their superior permanence. They thus possess greater volume. It is clear that in securing them the gain is in the direction of *more pleasure*. This is really the only meaning that the word gain can have. The relative worthiness of pleasures is, therefore, ultimately based on the quantity of pleasure yielded. It is this and nothing else that is meant when virtue is enjoined and vice condemned.

In any attempt to draw up a scale of pleasures in

their ascending order the localized sexual feeling would probably be put at the bottom as the most purely physical and least spiritual, but it should be observed that it is the most essential of all, having to do with the preservation not merely of the individual but of the race. Next in order would come the pleasure yielded by the organs of incretion and nutrition (tongue, palate, stomach, etc.). These are also second in importance and serve to preserve the life of the individual. The third place would be taken by the pleasures of hearing and sight upon which the fine arts rest. Although they probably yield to enlightened races more satisfaction than the ones already named, no one will claim that they possess any such importance from the broader standpoint of function and life. The pleasures of the emotions might be given the fourth place. They are both refined and enduring, and make up the greater part of all that the majority of mankind value in the world. Yet, except in so far as they are so intimately linked with the sexual instinct as to be virtually a part of it, as maternal and conjugal affection, they seem to exist chiefly for their own sake, neither preserving, perpetuating, nor enhancing life. This class of pleasures passes gradually up, as the result of increasing sympathy, from those of mere friendship and mutual attachment, through love of the helpless, to the purest altruism, which may be set down as a fifth class of pleasures.

The pleasure of "doing good" is among the most

delicious of which the human faculties are capable, and becomes the permanent stimulus to thousands of worthy lives. It is usually looked upon as the highest of all motives, and by some as the ultimate goal toward which all action should aspire. It should first be observed that the very act of doing good presupposes evil, *i.e.*, pain. Doing good is necessarily either increasing pleasure or diminishing pain. Now, if all devoted themselves to doing good, it is maintained that the sufferings of the world would be chiefly abolished. Admitting that there are some evils that no human efforts could remove, and supposing that by united altruism all removable evils were done away, there would be nothing left for altruists to do. By their own acts they would have deprived themselves of a calling. They must be miserable, since the only enjoyment they deemed worthy of experiencing would be no longer possible, and this suffering from *ennui* would be among those which lie beyond human power to alleviate. An altruistic act would then alone consist in inflicting pain on one's self for the sole purpose of affording others an opportunity to derive pleasure from the act of relieving it. I do not put the matter in this light for the purpose of discouraging altruism, but simply to show how short-sighted most ethical reasoning is. In the second place it is to be noted that, however pure and exalted this class of pleasure may be, it is one that is somewhat difficult to obtain. Life for the average person is more or less of a humdrum routine, and

opportunities for noble acts are rare. Any attempt to go beyond the normal course of uniform politeness, kindness, uprightness, and honesty, becomes dramatic or quixotic, and is readily detected as a sham. Only in hospital and asylum work is there room to devote a life to ministration, and even there it is found that scientific nursing is better than the mere display of sympathy and zeal.

For my own part I never have regarded the altruistic as the highest and purest of human motives. I place above them in this scale the pleasures of the *intellect*, and would make this the sixth and last class. The brain is not merely the organ of knowing. It is an emotional center also, and the feelings to which its exercise give rise are the most important from the standpoint of feeling of all that we have considered. On the other hand, they are the farthest removed from the domain of function. To the race they contribute nothing. Nature never intended that they should exist, for they are of no use to her. Their service is a personal one to the possessor of this faculty, and not to the world. I shall soon show their bearing upon our science of sociology. For the present I am considering them from the standpoint not only of psychology but of subjective psychology, as I have defined it. The pleasures of the intellect, if they do not do good in the altruistic sense, at least do no harm. They are the farthest removed from the sensual or physical of all pleasures. They are rarely intense, but they are the most last-

ing of all pleasures. They are purely spiritual, and least capable of abuse. They possess a certain dignity and nobility beyond all others. Finally, they are not difficult to secure, and nearly or quite every person may partake freely of them during the greater part of life. They are numerous, but the principal ones belong to two groups. These groups may be respectively denominated the *acquisitive* and the *constructive*, or the *receptive* and the *reproductive*. "Reason," says Schopenhauer, "is female in its nature; it can only bring forth after it has conceived."[1] The earlier portion of every one's life is devoted to acquiring — I will not say knowledge, would that it were! It is devoted to laying in the store from which it is to draw during the later parts. In a properly organized mind and under a just system of education this acquirement *is* chiefly knowledge, either of things or of actions. It is either learning *what* or learning *how*. Now, as each individual must begin at the beginning and learn everything for himself, the education of each new generation would be a matter for utter despair if there were no extenuating circumstances. The human mind would no more nourish itself from considerations of cold calculation than would the body of either man or animals without an immediate personal motive constantly impelling it in that direction. Not only the

[1] Die Vernunft ist weiblicher Natur : sie kann nur geben, nachdem sie empfangen hat. Schopenhauer. *Die Welt als Wille und Vorstellung*, Vol. II., Leipzig, 1859, p. 59.

past intellectual success but the future hope of mankind lie in the fact that the mind is endowed with an *appetite*. The satisfaction of this mental appetite is, with the single exception next to be noted, the highest, most enduring, and most profitable of all human enjoyments. It is a solace which all may find, a luxury which never surfeits or reacts unfavorably, a passion whose unlimited indulgence is always safe. For all these reasons the volume of enjoyment thus derived is greater than that derived from any of the sources hitherto considered.

But there is one still higher pleasure, the most exalted of all. This is *the discovery of truth*. Sweet as may be this receptive process,— the act of intellectual conception,— the productive or reproductive process — the act of intellectual parturition — is yet sweeter. The raw materials that have been received into the mind through all the senses, the results of experience and education, undergo a process of gestation, as it were, and are developed into new shapes. To drop the figure, the innumerable items of acquired knowledge are brought into relations with one another, compared, combined, and organized into conceptions of varying degrees of generality. Truth is the recognition of identity under varying aspects. The mind devotes itself to the discovery of truth amidst all the manifold elements of its stored materials. This is the highest form of thinking. The identities are usually between the higher psychic units. The primary psychic unit is

simple perception, but it is not until a multitude of registered perceptions have been organized into units of higher degrees that the process of identification begins. The higher the degree of the units the greater their resemblance to one another, and very complex psychic units are perceived to be all closely related. All knowing is a perception of relations, and this highest form of knowing is the perception of the relations that subsist among the largest psychic aggregates. This may take the form of generalization and be a classification of such aggregates. The truth then discovered is the position of the various conceptions in the hierarchy. But these conceptions are not merely subjective. They are built of materials from the outside world and they represent conditions existing in that world. Only in so far as they do this are they truths. But not to dwell on the psychology of the subject, what here concerns us is the fact that every such act of the mind is attended with an intense satisfaction. It seems almost a mockery to call it a pleasure, so far above all those experiences commonly called pleasures does it rise, but it certainly belongs to the same great psychic group as all other pleasures, and our language lacks the appropriate term to characterize it.

The power to discover truth exists in all minds, but in most, it must be confessed, it is very feeble, while comparatively few ever attempt to exercise it. This is, therefore, in the present condition of our race, a limited source of gratification, but it is ca-

pable of indefinite extension, and makes up in its sterling worth what it lacks in range and universality. Without it there would be no science, for science rests upon the discovery of truth and not merely upon the accumulation of facts. The real moral progress of the world is due to science, and therefore this motive may be regarded as the most altruistic of all.

It thus appears that, as a rule, those desires whose satisfaction is most important from the standpoint of nature or function are least important from the standpoint of the individual or feeling. That is to say, the more essential they are to life the less pleasure they yield, and *vice versa*. The first of these qualities may be called *necessity*, the second *utility*, and, thus defined, the necessity of a desire stands in an inverse ratio to its utility.

The several classes of human pleasures, therefore, as treated above, arranged in the descending order of their necessity and ascending order of their utility, will stand as follows: 1. Reproductive. 2. Nutritive. 3. Æsthetic. 4. Emotional. 5. Moral. 6. Intellectual.

I have dwelt thus at length upon the scale of pleasures because, as we shall now perceive, they constitute the basis of all human activity. It is upon this affective part of mind that sociology rests, and not upon its intellectual part. Sociology is a science and as such it deals with a field of phenomena controlled by certain forces. The social

forces are human motives, and all motives, in the correct sense of the term, have feeling as their end. To attain pleasure or avoid pain is the only incentive to action. All motives are desires, and the term which expresses the aggregate of desires is *will*. Desire, as I have formerly shown,[1] is a true natural force. The motor of the social world is will. It is what I have called the *dynamic agent* in society. The full import of this truth will be brought out in the seventh chapter. I have merely worked up to it here to show the direct manner in which sociology bears upon psychology.

Thus far we have confined ourselves exclusively to the affective side of the mind, or subjective psychology. It is in this region that the motive power of social operations has been found to reside. However trivial the affections may seem to the metaphysician, they are of primary importance to the sociologist. But while they constitute the source of power in social events, this is their entire function. They constitute the dynamic agent and nothing else. To render this power effective a *directive agent* is required. This is furnished by the intellect. It is the guide of the feelings. It is useless to speculate as to the relative value of these two agencies. Both are absolutely essential to so complicated a mechanism as society. The familiar comparison of society to an ocean steamer remains

[1] *Dynamic Sociology*, Vol. II., pp. 95 ff. *Psychic Factors of Civilization*, pp. 55, 94.

the clearest that has been proposed. The feelings embodied in will are represented by the engines, while the intellect is typified in the helm. The former in both cases is clearly the primary constituent, and yet without the latter it would fail of its purpose.

It is, however, worthy of remark, that what has been said applies only to man and society. Lower in the scale of life we practically have the dynamic without the directive agent. Unreasoning beings are devoid of a guide. They follow their feelings only. They are like a ship without a rudder. The substitutes are, first, a close adaptation to their environment, so that there are, so to speak, no reefs, shoals, or rocks, upon which they can be wrecked, all not thus adapted having already been wrecked; and, second (which is only a particular case of the first), instincts, that have been developed through selective elimination, and which limit the feelings and will to particular grooves in which they may safely act. It is upon this that depends all the social advance that animals have made, and the study of animal sociology would differ from that of human in dealing with instincts and adaptations instead of rational acts. So that while all associative phenomena rest on subjective psychology, distinctively human association depends upon and presupposes a fully developed rational faculty.

I have called this the perceptive, as distinguished from the affective side of mind. This term, though

inadequate to express the highest processes of the intellect, is well adapted to describe the incipient stages of rational life. Since the new biology has taught us to account for every organ and attribute by the law of advantage, the intellect of man has presented the most marked obstacle to this mode of interpreting nature. It is admitted even by Weismann and Wallace, the leading apostles of the neo-Darwinian school, that the highest intellectual faculties cannot be thus accounted for. So far as I am aware, I am the only one who has attempted to show a way out of this difficulty. I cannot go far into the question in this work, and must be content for the most part to refer to the place[1] where I have developed the thought. I will merely say that the intellect must be considered as the result of ages of slow development, that it began far back in the animal series, and that its sole purpose originally was to assist the will in attaining the objects of desire. Its primary stage I call *intuition*, passing into intuitive reason and judgment. The first form of knowing was a perception of relations, and this fully justifies the expression *perceptive faculties*. Their whole purpose was the creature's advantage, and they formed as legitimate a subject for natural selection to work upon as any other. The particular brain structures requisite to serve as organs of direction were immediately affected by the selective process, and developed normally under its influence.

[1] *Psychic Factors of Civilization*, Part II.

And thus was built up, cell upon cell, the enlarged brain of the highest animals, and especially of man, who seems to have been the first to reach the point where mental forces completely gained the mastery over physical ones, so that the only advantageous qualities worth mentioning were those that helped him to foresee, circumvent, and outwit the rest of creation. The evolving intellect throughout all this long pre-social and pre-moral period was exclusively devoted to the egoistic interests of individuals, acquiring sagacity, shrewdness, and tact, and exercising cunning, craft, strategy, and diplomacy in attaining its ends.

But this cunning was not wholly applied to animate things. A large stream of it took the direction of circumventing and taming the physical forces of nature. Cunning, thus applied, was called ingenuity and resulted in invention. This proved the most advantageous use to which the new agency could be put, and led to the development of the arts. Man may have been gregarious before there were any arts, but he can scarcely be said to have been social. Society, in its modern acceptation, must have originated simultaneously with the earliest form of art. We can scarcely conceive of art without society or society without art. The development of society has been the development of art, and human civilization has advanced through all the stages of culture into which ethnologists subdivide it as the result of successive advances in the perfection of the arts.

We are not now dealing with art but with mind, and our point of view makes it clear that the intellect in its primary characteristics was thoroughly practical in the sense that those races in which it was best developed were the fittest to survive, and this is all that the biologic law requires to account for the increase of an organ or faculty. It is also apparent that it has never lost this quality, and that the law was applicable throughout the human period, that it has operated during the historic period as fully as in the prehistoric, and that, in a much modified form, it may be said to be still in operation even in the most advanced races. The intellect is still an advantageous attribute in the biologic sense, and the difficulty before referred to is reduced to showing the relation of the advantageous to the non-advantageous faculties. The latter have been habitually regarded as constituting the whole of mind, and hence it became impossible to account for the origin of mind on natural principles. It is only necessary to affiliate the speculative powers upon the egoistic ones. This I have also attempted to do, and I believe successfully, on the neo-Lamarckian principle of the transmission of characters acquired by individual effort. I thus account for both the creative and the speculative genius of man, and the intellect in its most fully equipped form no longer presents an insoluble problem. These so-called higher faculties are simply derivative, and represent a surplus that has accumulated over

and above what was demanded for the essentials of life.

The consideration of the intellect as the directive agent, highly essential as it was, constitutes nevertheless a sort of digression or interruption of the main principle that was under discussion. In resuming the thread I will put some of the results previously reached into a somewhat different form. It was found convenient to personify Nature and ascribe to her an end or object. This object was generalized under the term Function. The object of the sentient creature was at the same time shown to be Feeling. Something was said of the scheme of Nature, or evolution, in the organic world. This, on closer inspection, proves to be distinct from function or the simple preservation and continuation of life. The latter involves growth and multiplication, but not change. Evolution, on the contrary, depends wholly upon change, and this involves a new principle, viz., *activity* or *effort*. It is through individual effort that the organism is molded to the environment, and this organic modification is what constitutes those perfectionments of structure that result in progressive development. We may therefore personify Evolution also, and ascribe to it an end or object. It is in the interest of Evolution that the organism put forth efforts to attain its ends. The purely biological formula may therefore be stated as follows: —

The object of Nature is Function.

The object of the Organism is Feeling.

The object of Evolution is Effort.

Rising to the human plane, we have simply to adjust our terms to the advanced state of things. For the first proposition no change need be made in the formula. In the second proposition, the organism becomes Man, and the sum of agreeable feeling which he seeks may be expressed by the word Happiness. In the third element, instead of the world at large, the beneficiary of human exertion is Society. The sociological formula will therefore stand as follows: —

The object of Nature is Function.

The object of Man is Happiness.

The object of Society is Effort.

CHAPTER VI

THE DATA OF SOCIOLOGY[1]

THE leading distinction between modern and ancient philosophy is that the former proceeds from facts while the latter proceeded from assumptions. Every science is at the same time a philosophy. The greater part of all that is valuable in any science is the result of reasoning from facts. What would geology be, if all we know was the bare facts that the rocks present? The history of the world as geologists now understand it is all deduced from a state of things that is now fixed or stationary. It is true that similar movements are now taking place, or may be artificially caused to take place, from which past movements may be inferred, but they are none the less inferred. The geological period practically closed when the human period began, so that no record is possible. Yet who shall say that we do not know all that we claim to know about the earth's history? The evidence, though all circumstantial, is absolutely irresistible as to the main points on which all geologists agree. Yet it is all inference.

[1] *American Journal of Sociology*, Vol. I., No. 6, Chicago, May, 1896, pp. 738–752.

In other words, geology, so far as it furnishes us anything of value, is a philosophy. As much might be said of physics and chemistry. They deal with agencies and elements wholly beyond the range of our senses, and yet most of the material progress of the world has resulted from men's reasonings about these invisible and intangible things. The chemical atoms, the luminiferous ether, electricity, all existed the same as now before anything was known of them. It is clear, therefore, that all the value they have now is due to the actions of men, and this has chiefly consisted in observing facts and drawing conclusions from these facts. So that chemistry and physics constitute a philosophy. Thus we might go through the whole list. The more complex a science is, the greater the number of facts required to reason from, and the more difficult the task of drawing correct conclusions from the facts. When we come to sociology the number of details is so immense that it is no wonder many declare them wholly unmanageable. I confess that to proceed according to the method chiefly in vogue of attacking the concrete phenomena presented by local and restricted areas and accumulating a heterogeneous mass of details, the case would be hopeless. The only prospect of success lies in a classification of the materials. This classification of sociological data amounts in the end to the classification of all the subsciences that range themselves under the general science of sociology. In calling this chapter the "Data of Sociology," I

have no idea of attempting an enumeration of the data of sociology. All I hope to do is to indicate how we can proceed to gather and investigate the data. To attempt to give details would be like taking a shovelful of earth from the side of a mountain. But if the details can be classified into first large and then smaller, and then still smaller groups, some of these groups may finally be so far reduced as to offer some hope that they may be investigated. This work being devoted wholly to the philosophy of sociology, does not contemplate the consideration of any even of the smaller groups of sociological data, and the only justification for a chapter on the data of sociology is just this effort, so to organize the different classes of data that it may be clearly seen what the concrete facts are from which the laws of associative action are to be deduced.

Let us begin with the most general and proceed analytically toward the more and more special. In fact, it will be well to begin entirely outside of sociology proper and consider first, on the basis of the classification attempted in the first chapter, and in the light of all that has been said in the four subsequent chapters, the dependence of sociology upon the other less complex and more general sciences. These simpler sciences may themselves be regarded as constituting a part of the data of sociology. Some knowledge of them is essential to any adequate comprehension of the full scope and meaning of sociology. It may have a discouraging sound to say that in order

to be properly prepared for the study of sociology one must first be acquainted with mathematics, astronomy, physics, chemistry, biology, and psychology, but when it is clearly understood what is meant by this it loses much of its formidableness. For it has never been maintained that it is necessary to become a specialist in all, or even in any of these sciences. It is only essential to have a firm grasp of the leading principles of all of them and of their relations one to another. It would be far better to devote time to this aspect of each of them than to mastering the details, as is so largely done in the present system of education. A certain amount of detail is of course necessary to furnish a full conception of what any science is and means, but it need go no farther than this. The pedagogic principle applies to any science. A fair acquaintance with the general principles of all the simpler sciences is essential to a full understanding of the one it is proposed to make a specialty of. The astronomer must understand mathematics, the physicist should be familiar with the laws that govern the solar system, the chemist should be acquainted with the general principles of physics, the biologist should have a fair command of chemical phenomena, and especially of those of organic chemistry, and the psychologist cannot dispense with a thorough foundation in the general laws of life and in the facts of anatomical and physiological science. So, of course, the sociologist, before he can fully perceive the scope and sig-

nificance of his science, must know the laws of mind which directly underlie the whole social fabric.

It is also always a great gain if the philosophical student of these higher sciences can have the advantage of much deeper drafts from the more directly underlying sources. It has an immensely broadening and deepening effect upon the study of mind or of society, to pursue, as a pastime or as a profession, some special branch of biology — botany, entomology, ornithology, or general zoölogy. The special study of physiology and anatomy, particularly their comparative study, is also exceedingly helpful to the psychologist or the sociologist. In fact, long and continuous occupation with any special class of natural phenomena, no matter how restricted that class may be, yields an acquaintance with the ways of nature that is wonderfully educating in fields far outside of that narrow circle of observation.

This apparently iron-clad law of the study of the sciences, which seems to make such an extraordinary tax upon the sociologist, is therefore, after all, little more than the requirement that the sociological student shall first of all acquire a good general education. It does not so much prescribe the quantity of his learning as the direction it should be made to take. It says that his education should be mainly scientific, that his study of the sciences should be so ordered as to give him a clear idea of their natural relations and dependencies, that they should be taken up so far as possible in the order of their decreasing

generality and increasing complexity, and that they be pursued in this direction at least to include the science upon which the chosen specialty directly rests. In the case of sociology, this is of course to cover the entire range of the sciences, but in reality, this is nothing more than any well organized curriculum necessarily involves, and even the mathematician often goes through the entire course.

It could be easily shown that sociology not only depends upon psychology and biology for its fundamental principles, but that the phenomena of human association would be seriously affected by any modification in the more general laws of the physical universe. Consider how different would be the affairs of men if the angle which the plane of the earth's orbit makes with the ecliptic were considerably greater or less, so as materially to affect the seasons. So if the laws of motion, of gravitation, or of light and heat vibration were other than they are, the social, and indeed the whole organic world, would be correspondingly different. Chemical phenomena still more closely influence animals and men, and it goes without saying that vital and psychic phenomena are what immediately govern and shape those of the human and social world.

The primary data of sociology, then, are seen to consist of this general preliminary scientific education, this firm grasp of the broad cosmical principles that underlie and govern all departments of natural phenomena. But it is just this, as already remarked,

that really ought to be afforded to every member of society irrespective of the field of labor that may be chosen. It is this that furnishes the most valuable of all knowledge, viz., knowledge of the environment. Paradoxical though it may sound, the knowledge of the environment is the most practical and useful of all knowledge, and it should be the principal aim of all sound education to furnish it. But upon this I need not now enlarge.[1]

The more specific data of sociology consist in the facts contributed by the various branches or sciences that fall directly under it, in the relation described in the first chapter, of true hierarchical subordination. This is in harmony with the general method of science in proceeding from the concrete to the more and more abstract. The sciences just enumerated are abstract in the sense of abstracting the concrete facts and subordinate laws and dealing only with the highest and most general principles. But such general principles are derived from the less general ones of which they are the generalizations. The subordinate principles are, in turn, only the expression of orderly phenomena, and such phenomena are only the modes of manifestation of the concrete objects occupying each field. The establishment of these higher sciences is simply a process of generalization from the facts of observation.

In the case of sociology we have first and foremost the concrete fact *man*. It is absolutely necessary to

[1] See *Dynamic Sociology*, Vol. II., pp. 492 ff.

the study of sociology to study man as a concrete fact. Anthropology, as was shown, is a concrete science, and differs generically from biology and psychology, which deal respectively with the laws of life and mind. It is even more concrete than either botany or zoölogy, in treating only of one species, or as some think, genus, of living things. So far as man's actions are concerned, especially his rational actions, they fall under psychology, and have already been considered. But the creature man, considered as a material object and as a great group of innumerable discrete individuals possessing many qualities, constitutes the primary datum of sociological study. First, this being may be described (ethnography) and subdivided into different races (ethnology), and then special attention may be given to his physical constitution (somatology), and also to what he produces (technology). Closely associated with this last, indeed an important part of it, is the search for the record he has left, consisting almost exclusively of such products belonging to past periods and preserved from destruction. This is archæology. But many of his productions are not material, and consist of *institutions* of various kind. Using this term in a broad sense, institutions embrace language, customs, governments, religions, industries, and ultimately art and literature. The study of these constitutes real history as distinguished from the mere "*histoire-bataille.*" Migrations and the vicissitudes of empire, even the doings of the

persons who happen to stand in the front of these movements, belong here, but their importance is apt to be exaggerated. All of these great fields of activity are capable of being divided and subdivided, and each little part erected into a science to be specially studied. The study of language forms the science of philology. Out of government there unfolds the great field of law and jurisprudence. The study of industry opens out in one direction into the field of political economy, and in another into that of invention, machinery, and all the arts of civilization. History becomes crystallized in the form of statistics, which is the algebra of events.

Now all this vast array of phenomena manifested by man in his manifold relations with the material world constitutes the data of sociology, and something must be known about it before any one is capable of entering into the consideration of those higher laws involved in human association, which, on final analysis, are simply generalizations from the facts of lower orders. It is true that in the course of acquiring a sound general education every one necessarily learns something about most of these things, but this is insufficient to constitute an adequate preparation for the study of sociology. This knowledge needs to be systematized and specialized, and directed to the definite end. The student needs to know just what he is pursuing it for. There is no more vicious educational practice, and scarcely

any more common one, than that of keeping the student in the dark as to the end and purpose of his work. It breeds indifference, discouragement, and despair. Therefore, while it would be fruitless to attempt to teach the principles of sociology before the student was put in possession of the facts from which those principles are derived, it is of the utmost importance to inform him as early as he is likely to understand what it means, that there is a great general science of society toward which all this is leading, and constantly to keep him imbued with the idea of an ultimate utility beyond the mere satisfaction of the desire to know facts.

Looking over this great field with the eye of reason, we are able to grasp its general import; and first of all, it is profitable to note that the facts that make up the data of sociology constitute so many varying classes of phenomena. That is to say, they are the manifestations of the qualities or properties of the multitudinous units of society or individual men. These differ at different times and places and constitute a complex manifold or multiple. There are distinct individualities in all the aggregates, from the ultimate units themselves upward through all their combinations into aggregates of higher orders. The study of such a varying manifold, however viewed, is essentially in the nature of history, and therefore the approaches to sociological study are all primarily historical. Moreover this history conforms in all essential respects to the

character of the phenomena which are currently described by the term *natural history*.

Now this natural history of society readily subdivides into two groups, according to whether we study man himself in his social aspect, or his achievements. The first of these groups is anthropology in its proper sense, a sense considerably more restricted than that in which the term is commonly used. It would, for example, rigidly applied, exclude technology and archæology, but this is less important to our present purpose. It might be extended to embrace the ruder forms of art, but it has chiefly to do with race characteristics as the result of those individualities that have been mentioned, including everything that serves to differentiate the groups of human beings found inhabiting the earth. In short, it is *par excellence* the *natural history of man*.

The second subdivision of the subject, which relates to human achievement, as distinguished from man himself, considers everything which can, in the broadest acceptation of the term, be classed under the head of human institutions. This branch deals essentially with what ethnologists denominate *culture*, and constitutes *history* proper. The several stages of culture, savagery, barbarism, civilization, enlightenment, or by whatever names they may be designated, are so many steps in the general progress of what is called civilization in the broader and more popular sense. The study of this is also a branch of natural history, since, properly, all history is

natural history, but here we are one remove farther from the biological base from which the natural history of man, as I have defined it, directly proceeds. Especially does the psychological element now distinctly make itself felt, and the qualities we have to deal with, instead of being mainly physical, become almost exclusively psychical. The animal world, properly speaking, achieves nothing. It may work changes, more or less extensive, in the face of nature, but this is merely the incidental result of activities which do not have any such effect for their object. Nothing in the nature of art exists below the human stage, and in that treatment of man from which art is abstracted, human achievement is also necessarily omitted. Man is considered as an active being, indeed, as constantly *doing* something, but not as ever *making* anything. In the *history of culture*, as distinguished from the natural history of man, he is considered as primarily a producer of what did not exist before. While we are unacquainted with any stage of human history in which these two states do not coexist, it is a highly logical mode of studying the subject to treat them apart.

The causes which originally led to human association were treated in the fourth chapter; it may be added here that no race or condition of men is known in which association does not exist. We may therefore assume that it took place very early, and probably at a wholly subhuman stage. It was doubtless one of the most powerful mutual factors in the rapid

brain development mentioned in that chapter. This brain development was the condition of the psychic element which made man a creator, the master instead of the slave of his environment, and which above all else distinguishes him from the rest of nature. The first and foremost, then, of all the productions of this being is society itself, considered as an artificial institution. For, however early it may have come into existence, it is to be distinguished from all animal societies as the product of reason instead of a product of instinct. It is this and this alone which constitutes it an institution. The study of this institution from this point of view, in its most embryonic stages and among the least developed races, therefore constitutes one of the most important fields of research, and comes clearly under the head of sociological data.

About the first subject to which associated man turned his attention must have been the proper care of the young. Natural selection alone would secure this, since those who neglected it would be eliminated. This is the basis of the institution of marriage, and a careful survey of the various forms which this institution has assumed, both in primitive and advanced races, shows that it is in all cases more or less successfully adapted to this end. Even polyandry, which prevails in some districts of Thibet, and which seems so repugnant to our ideas, has been shown to be the best form of marriage for a people leading the kind of life which is required in such a

country, where a portion of the men are obliged to absent themselves from home for a large part of the time. It is not enough to observe and record the customs of a people; sociology, scientifically studied, inquires into the reasons that underlie customs.

The institution of government doubtless grew out of that of the family. The latter was not always, and is not everywhere, restricted to the narrow degrees of kinship that we recognize as alone belonging to it. The tendency originally was to embrace all of one kindred in one family, and this is the true origin of the gens. But here came in another apparently antagonistic principle. Somehow the lowest races of men realize that close breeding is injurious. How they find it out is an interesting question, but one that cannot be discussed here. They all know it and act upon this knowledge. To preserve the vigor of the race is next in importance to preserving its existence. Therefore, marriage institutions must be framed to secure this end as well as the other. Hence the widespread and severe penalties against marrying within the gens. Leaving the vast subject of primitive marriage with these few general hints, we may further note the association of gentes into tribes and the consolidation, by war or otherwise, of tribes into nations. From this to the study of the semi-civilized and civilized nations and governments of the world the steps are easy and natural.

Going back again to the earliest dawn of society

we may take up another prominent class of phenomena and study the development of human thought. The simplest phenomena of nature have always been regarded as taking place according to natural laws. The experience of the race and of each individual is sufficient to teach this. Primitive man is not troubled about the causes of the facts of everyday experience, and unbeknown to himself, he reaches the scientific conception of uniformity and invariability in this restricted field. In fact, in a still narrower field, animals also act upon this same principle. If they are not rational, they at least are not irrational. What mind qualities they manifest are always thoroughly practical and sane. Their acts are always characterized by what is called "horse sense." It is only rational man who deviates from this norm and indulges in irrational actions. This happens as soon as he begins to reason about phenomena, *i.e.*, to draw inferences from the facts of observation. His data are always at first necessarily insufficient to enable him to draw the correct conclusion, and he consequently draws an erroneous one. When we reflect that it has required ages of exhaustive scientific investigation to enable us to reason correctly about the causes of such everyday phenomena as an echo, a shadow, or a reflection in a pool of water, we can readily see how impossible it must be for primitive man to reach the solution of the recondite problems that nature constantly thrusts upon him. But the fact that,

unlike the humbler and more sensible creatures below him, he *tries* to solve these problems, is just what stamps him as a superior being. This act of his is the beginning of philosophy, and the study of the philosophy of primitive man constitutes legitimate data for sociology. Primitive philosophy is always anthropomorphic. A phenomenon, from its very name, is a change, a transformation, an activity. But the only being the primitive man knows to possess the power of spontaneous activity is himself, and he naturally imputes to every other change the same power. I need not trace the steps from this primordial stage to a full-fledged mythology, but mythology constitutes the philosophy of all undeveloped races. Out of mythology grows religion, if it is not itself religion, and religion is essentially a product of man's rational faculties applied to transcendental questions. It can only be from a profound misconception of this truth that Mr. Benjamin Kidd, in his book on *Social Evolution*, repeatedly speaks of religion as "ultra-rational." It has surprised me greatly that the religious world has failed to call him to account for such a fallacy, and in seeming rather to uphold him, it is tacitly admitting this, greatly to its discredit. Religion is primarily and fundamentally rational. It had its origin in an effort of the reason. No being without a well-developed reason is capable of conceiving of a religious idea. It is, in fact, one of the great branches of philosophy, and the history of religion

is in great part the history of human thought. At every stage it constitutes most important data for the science of sociology.

And then we might go back again and take up another great trunk line of social history and trace the rise and progress of the arts. Nothing is more fundamentally important to sociology than to study the workings of the inventive faculty, spurred on by its strict mother necessity. Leaving it to the psychologists to teach how this most important of all psychic attributes arose,[1] the sociological course may limit itself to the study of its products and to tracing it down through history to where it finally ushered in the age of machinery. Involved in this is the whole history of human industry, and political economy is itself only a special department of this wider field of research.

This is the place to point out the grounds that exist for the claims of the historical school of political economy. We have seen that the data of sociology are, properly understood, essentially historical. Sociology, to become a true science, must rest on facts. It must consist of a body of truth, *i.e.*, of broad principles derived from an accurate coördination of known facts. But from the nature of the case these facts must be furnished by the activities of human beings. These activities, taken in a broad sense, constitute human history, and as soon as we can divest ourselves of the idea that history is limited

[1] Cf. *Psychic Factors of Civilization*, Part II., especially chaps. xxvii.–xxx.

to a narrative of the doings of a few men whom events chance to bring to the surface at long intervals, it will become apparent that the entire industrial activity of the world belongs to history. But in such a vast field it is very important to find some mode of simplifying phenomena. It is necessary to seize upon certain natural keys to the whole system. If a few of the principal strands upon which it is all woven can be discovered and kept distinct, the whole web may be seen to much greater advantage. There are many of these, and each student may choose his method. No better system has ever been proposed than that of regarding events as products of ideas and classifying ideas. This is the true psychic method and recognizes sociology as directly resting upon psychology. It is found that the progress of intelligence produces regular and necessary changes in human ideas. In the primordial blank condition of the mind the anthropomorphic mode of interpretation is the only one; inanimate objects are animated and animals are endowed with intelligence. Fetishism prevails. In the next stage intelligence and will are disembodied and ascribed to immaterial or spiritual beings. Polytheism reigns. At length the number of these beings suffers a reduction and ultimately they are limited to one. Monotheism holds sway. Under monotheism the spirit of speculation finds encouragement, and with it the forces of nature and the properties of matter are erected into so many separate and independent existences or en-

tities. Ontology or metaphysics dominates human thought. The faith in such entities is not reverential, and the bolder spirits soon question them and dare to institute investigation. The result is always the same, and the true order of nature is brought to light. How profoundly the whole social structure is influenced by the domination of one after another of these great fundamental classes of ideas, can only be understood by a careful study of human history from this point of view. The great number of social correlations that can be found by such an inquiry is especially interesting. The most noted is that of militancy and the *régime of status*, as Sir Henry Maine calls it, with the earlier theological stages, and of industrialism and the *régime of contract*, in Spencer's phrase, with the later rational and scientific stages.

But, as I said, this is not the only legitimate and successful way to simplify the study of the real history of society, and the German historical school has already accumulated an immense amount of data, especially with reference to the historic period, and is still at work, almost, as it would seem, without conceiving the idea of making any general application of it to the founding of a science of sociology, but which is certain sooner or later to be thus utilized to the advantage of our science.

I have already referred to statistics as one of the chief sources of sociological data so far as relates to the history that is in process of making in modern states, and it would be a serious fault not to men-

tion the method adopted by Spencer under the name of "descriptive sociology" for the lower races now occupying the outlying portions of the globe. But the data acquired by this method lose much of their value through their extreme unreliableness. The travelers who have supplied the greater part of this material, however well meaning, lack for the most part the scientific training necessary to qualify them for such work, and the only correct method is that of sending out trained observers representing some scientific body, who shall make systematic observations under the guidance of fixed principles, designed to avoid to the utmost the errors into which the casual observer is liable to fall. This method has been adopted for many years by the United States Bureau of Ethnology in the study of the North American Indians, and the numerous able and voluminous reports of that bureau constitute an invaluable resource for the sociologist who aims to found the science upon a broad ethnic basis.

Much has been said of late about the so-called "special social sciences" and their relation to sociology. Some regard sociology as consisting entirely of these sciences and as having no existence apart from them. Others distinguish sociology from the special social sciences, but in different ways. The latter are sometimes identified with "social science," and this is treated as distinct from sociology. There is less variety of opinion relative to the nature of the special social sciences than there is relative to

what sociology is if distinguished from these. I have often been asked my opinion on this question, and this seems to be the place to indicate my method of dealing with it.

The special social sciences are numerous, and, in many cases, there is room for differences of opinion as to what constitutes such sciences, but the following are the principal ones about which there is little dispute: ethnography, ethnology, technology, archæology, demography; history, economics, jurisprudence, politics, ethics — all taken in a scientific sense, and with such natural subdivision of each as it admits of. No one of these, nor all of them together, can be said to form sociology, but sociology is the synthesis of them all. It is impossible to perform this synthesis without a clear conception of the elements entering into it. These, therefore, constitute the data for the process. The special social sciences, then, are not themselves the science of sociology, but they constitute the data of sociology.

From all that has been said it follows, that sociology proper, or the science of the laws of society, is a study that requires ample preparation. I cannot, therefore, agree with those who would introduce it early in the undergraduate course. At the earliest it should not be taken up before the senior year, and its study in any adequate manner should be made postgraduate. It is essentially a university study, while the preparation for it, *i.e.*, the acquirement of the Data of Sociology, belongs to the gymnasium.

PART II

SOCIAL SCIENCE

CHAPTER VII

THE SOCIAL FORCES[1]

THE second, or Greek, component of the word *sociology* is the one that is usually employed in the names of sciences. While etymologically it only signifies a *treatise* on some subject, it has come to signify a treatise of a systematic kind on a subject that can be reduced to law. The proper designation of a true science should have the termination "nomy" or "onomy," from the Greek *νόμος*, a law. Especially should this be the case for the abstract sciences, or those dealing primarily with laws instead of concrete objects, such as are all five of the sciences of the Comtean "hierarchy." As a matter of fact, the name of only one of these sciences, astronomy, has the proper termination. *Bionomy* has already been used,[2] and *psychonomy* and *socionomy* are naturally formed, but physics and chemistry do not readily admit of a similar modification. The former might logically be divided into *baronomy* and *etheronomy*, the first embracing the gravitant forces, and the second magnetism, electricity, and all the radiant

[1] *American Journal of Sociology*, Vol. II., No. 1, Chicago, July, 1896, pp. 82–95.

[2] Comte, *Phil. Pos.*, III., 331.

forces. Chemistry, perhaps derived from Greek *χημεία*, or from *χήμη*, a measure, or even from *χημία*, the Greek form of Khmi, a name for Egypt, has come to us through the Arabs in the form *alchemy*, which was variously spelled in early English literature, one of the variants being *alconomy*, said to have been employed from its analogy to astronomy. There would be no impropriety in restoring this variant and thus completing the series: Astronomy, baronomy, etheronomy, alconomy, bionomy, psychonomy, socionomy.

The scientific idea embodied in the word *law* is uniformity of movement. But moving bodies, such as atoms, collide and transfer their motions to others. Upon this is founded the modern doctrines in mechanics discussed under the general name of the "theory of units." The three ultimate elements in this theory are mass, space, and time. Motion being assumed, the *rate*, or velocity, is equal to the space divided by the time. When the mass, or quantity of matter is taken into the account there arise four manifestations of force. The simplest of these is mere *momentum*, which is equal to the product of the mass into the velocity. The next simplest stage is *force* proper, which is the mass into the rate of change of velocity, or acceleration. The third is *energy*, as now understood by physicists, *i.e.*, kinetic energy, which is half the product of the mass into the square of the velocity. The fourth stage represents the *power*, or rate at which energy is produced

or consumed. The distinction between these fundamental quantities is clearly shown by the following algebraic statement, showing how the units of mass, space, and time enter them. Denoting these units by m, s, and t, respectively, we have: —

$$\text{Momentum} = \frac{ms}{t}, \text{ or } mv$$

$$\text{Force} = \frac{ms}{t^2}, \text{ or } \frac{mv}{t}$$

$$\text{Energy} = \frac{ms^2}{t^2}, \text{ or } mv^2$$

$$\text{Power} = \frac{ms^2}{t^3}, \text{ or } \frac{mv^2}{t}.$$

The theory of units is applicable to every true science in proportion as it can be reduced to exact measurement. In mechanics, astronomy, and physics the phenomena can, for the most part, be thus reduced, but in the more complex sciences, at least in their present state, this can be done only to a limited extent. It must not, however, be inferred from this that exact laws do not prevail in these domains. They are as rigid here as in the simpler ones, and the only imperfection is in our knowledge of them. The acceptance of this statement is what constitutes scientific *faith*. Those who do not accept it and doubt the uniformity and invariability of natural law in the fields of life, mind, and human action, simply lack faith in the order of the universe.

In a certain very wide sense all force is one, but

from its different modes of manifestation it is convenient to recognize a number of forces. The law of the conservation of energy, or of the correlation or transmutation of forces, shows that all these different forms of the universal force are interconvertible. Astronomy and baronomy deal with the gravitant forces, while etheronomy and perhaps alconomy, deal with the radiant forces, which seem to be opposed to the former. The workings of the universal force in bionomy we call vital or biotic, while in psychonomy we call them psychic. For socionomy I long ago proposed the name "*social forces*,"[1] not as an absolutely new expression, but as the first attempt to give it a definite technical meaning. For I went into a somewhat elaborate explanation of what constitutes the social forces, and especially of what they have accomplished and how they have accomplished it. In the second volume (chap. viii.) I essayed to prove that they are true natural forces and obey the Newtonian laws of motion. But I did not in that work attempt to show that sociology derives its primary laws directly from psychology. This was done in my *Psychic Factors of Civilization*, published in 1893. In the fifth chapter a portion of this argument was briefly recapitulated. The present chapter can at best be only a similar brief recapitulation of the general treatment of the social forces as set forth in those works.

[1] *Dynamic Sociology*, New York, 1883, Vol. I., chap. vii., pp. 468 ff.

All sciences, in order to be such, must be domains of forces. Until a group of facts and phenomena reaches the stage at which these can be generalized into laws, which, in turn, are merely the expressions of the uniform working of its underlying forces, it cannot be appropriately denominated a science. Biology, since Darwin, has fairly entered upon this part of its history. Psychology and sociology have scarcely reached it. Most of the work in both is still confined to the observation of isolated facts without much attempt at their coördination or reduction to law. In psychology, as we saw, forces have as yet scarcely been recognized. Philosophers were content, until within quite recent times, to study the phenomena of the most derivative of the human faculties, and scarcely a suggestion can be found that these faculties could have been naturally produced. Intellect, memory, reflection, imagination, and other admittedly remarkable phenomena have been long studied, and a vast amount of speculation has been done in these fields. But the affective side of the mind in which the forces reside has been ignored so far as any attempt to understand its relations to the rest of mind is concerned. The appetites, passions, and even emotions, though recognized as having a necessary relation to ethics, have not been thought of as an integral part of mind. They are, in fact, the genetic source of all the other faculties, the seat of all psychic power, and the basis of any true science of mind.

In a somewhat similar manner the dynamic basis of society has been overlooked. The cause, not only of the primary fact of association itself, but of all other human activities, is *appetite*. Whether looked at from the standpoint of function or from that of feeling, *i.e.*, whether we consider the end of nature or that of the creature, it comes to the same thing. Every act proceeds from motive, and that motive can be none other than the satisfaction of some want. The capacity to want is planted in the organic structures. It is the necessary concomitant of the capacity to feel. The primary form of feeling is intensive, *i.e.*, it is either agreeable or disagreeable, pleasure or pain in some degree, however slight. This is the incipient distinction between good and evil. The pleasurable is the good, the painful is the bad. Every organism is thus constituted as a condition to its existence, and equally essential is it that the impulse should exist to perform the appropriate acts. This impulse causes the creature to seek the good and shun the evil. All this is readily accounted for on the leading principle of modern biology, natural selection, or, as I prefer to call it, the principle of advantage. In short, *desire*, taken in its widest sense, both positive and negative, is the real force in the sentient world. It is the dynamic agent in the animal world including the human sphere, and therefore constitutes the *social force*. It is essentially psychic, and this is the bond which lashes sociology so directly and so firmly to psychology.

The same reason exists, and no better, for speaking of this phenomenon in the plural and recognizing the existence of *social forces* as we saw for speaking of the universal force in the plural and recognizing physical forces. Just as gravitation, heat, light, etc., are only so many modes of manifestation of the universal force, so the various social forces that may be separately considered are only so many modes of manifestation of the one social or psychic force. Indeed, this psychic force itself is in its turn only a mode of manifestation of the universal force. "Desire is the all-pervading, world-animating principle, the universal *nisus* and pulse of nature, the mainspring of all action, and the life-power of the world. It is organic force. Its multiple forms, like the many forces of the physical world, are the varied expressions of one universal force. They are transmutable into one another. Their sum is unchanged thereby, and all vital energy is conserved. It is the basis of psychic physics and the only foundation for a science of mind.

"It should, however, be added that the parallel between physics and *psychics*, as thus defined, fails at one point. While, so far as is known, there has never been any loss of psychic energy, it is certain that there has been an immense increase of it. Indeed, time was when none existed. It has developed or been evolved with all organic nature and has increased *pari passu* with the increase of mind and the development of brain. Complete analogy be-

tween the organic and inorganic forces is not reached until it is recognized that the former are derived from the latter, and that vital and psychic forces are simply additional forms of the universal force. The soul of man has come from the soul of the atom after passing through the great alembic of organic life."[1]

This new force represents a step forward in the evolution of the world. There had been many such steps before this one was taken, and, as we shall see in a future chapter, there has been at least one since. Each such step represents progress, and this progress is always in the nature of evolving new modes of manifestation of the universal force. Not only so, but each successive step secures a better, *i.e.*, a higher, more efficient mode of manifesting it. "The course of evolution . . . has been in the direction from the unorganized and inefficacious toward the organized and efficacious through the process of storing energy in appropriate forms. This has taken place by a series of successive steps, each resulting in a more efficient product, that is, one possessing, in addition to the properties of antecedent products, some new property with a special power of its own capable of better work."[2]

Such is the essential or cosmical nature of the social forces, and it remains to consider in a general way the mode of their operation. It is clear that

[1] *Psychic Factors*, pp. 55–56.

[2] "The Natural Storage of Energy," *The Monist*, Vol. V., Chicago, January, 1895, p. 257.

we must proceed exclusively from the standpoint of feeling. Each individual or social unit must be regarded as a magazine of feelings, for the most part in the nature of unsatisfied desires, and therefore representing as much force as it requires to satisfy those desires. This energy is always to a large extent potential rather than kinetic, but the leading problem of sociology is how to convert the potential energies of society into kinetic energy. The amount of energy thus set free is the true measure of the strength of the social forces at any given time.

The classification of the social forces from the standpoint of feeling is substantially the same as from that of function. This results from the fact already explained, that both lead to the same result and are the necessary correlates of each other. In giving names to them in Dynamic Sociology I employed terms that connote function instead of feeling, because the latter would have been difficult to find. This is due to the functional side being almost the only one ever mentioned, so that, not only are there no well-crystallized terms in which to describe the side of feeling, but even with the most careful explanation it is difficult to convey the idea. This is illustrated by the explanatory words which I placed after the several classes of essential forces in the table of classification on page 472 of Vol. I., which is here reproduced without change : —

- The Social Forces are:
  - Essential Forces
    - Preservative Forces
      - Positive, gustatory (seeking pleasure).
      - Negative, protective (avoiding pain).
    - Reproductive Forces
      - Direct. The sexual and amative desires.
      - Indirect. Parental and consanguineal affections.
  - Non-essential Forces
    - Æsthetic Forces.
    - Emotional (moral) Forces.
    - Intellectual Forces.

I have seen no reason to modify this classification in any essential respect. Some slight change in the phraseology might adapt it better to such a cursory treatment as I am now making, and place certain of its aspects in a somewhat clearer light. The "Preservative Forces" may be called the Forces of Individual Preservation; the "Reproductive Forces" may be called the Forces of Race Continuance; and the "Non-essential Forces" as a whole may be called the Forces of Race Elevation. Attention may also well be drawn to the fact that the "Essential Forces" relate primarily to bodily or physical wants, while the "Non-essential Forces" relate chiefly to mental or spiritual needs. These terms still connote functions, which seems unavoidable, and the Social Forces may be reclassified, as follows: —

Physical
Individual Preservation
Positive
Negative
Race Continuance
Direct
Indirect
Spiritual
Æsthetic
Moral
Intellectual

It is always a question, when treating of the bodily or physical social forces, whether it is preferable to begin with the preservative or the reproductive group. There are many reasons why the latter seem to be the more fundamental. The race is more important than the individual, and in developed society the family is the most important social structure and the basis of the state. But going farther back and tracing the two principles entirely through the biological series, we at last arrive at the most fundamental of all the truths involved, viz., that in its ultimate analysis and most original form, reproduction is merely a mode of nutrition. Resting the case upon this primordial truth, I will adhere to the order of treatment which I adopted in Dynamic Sociology and make the nutritive group the first of the essential social forces.

Forces of Individual Preservation. — When we come to deal with the social forces from the subjective side, *i.e.*, from the standpoint of feeling, we

have to consider their direct effects as true natural forces. The individuals in whom they reside must be represented as impelled by them to perform acts, and as obeying these impulses as rigidly as physical bodies obey the influences that cause them to move. These impulses in human beings are of course exceedingly complex and subtle, so that in many cases this does not seem to be true, but this is because we are unable to take them all into account. In the advanced stages of human development when intellectual and moral influences have entered the field the case is still more complicated, but even then, if there is a social science, what I have characterized as scientific faith, when it is fully developed, does not permit any doubt to come in and qualify in the least the universal law, and we must say, with Immanuel Kant, that "if we could investigate all the phenomena of his [man's] volition (*Willkuhr*) to the bottom there would not be a single human act which we could not with certainty predict and recognize as necessarily proceeding from its antecedent conditions."[1]

The preservative forces are among the simplest of man's nature. They may be divided into two classes, negative and positive. The negative ones are those that protect him from injury and destruction. Whatever produces pain is shunned, and even if nothing were known about death, every individual

[1] *Kritik der reinen Vernunft*, ed. Hartenstein, Leipzig, 1868, p. 380.

would fly from whatever experience had taught him to be productive of painful effects. The mere escape from physical danger and from enemies is only a small part of the effect of this class of forces. In man the most important sociological effects have been the many ways in which it has led him to provide for himself clothing and shelter as a protection from the elements and from a hostile environment in general. The application of all this to the science of sociology is too obvious to require elaboration.

We will therefore pass to the other or positive class of preservative social forces. These have directly to do with the function of nutrition. The fact that every one will seek food is so patent that no one ever stops to reflect upon a possible condition in which this should not be the case. Yet such a condition is easy to imagine. All we have to do is to suppose an individual devoid of taste and whose stomach is incapable of the particular sensation called hunger. This sensation is very different from the ordinary forms of pain, and it would make no difference how painful the sensation of an empty stomach might be, if it did not take this particular form no effort would be put forth to supply its needs. Hunger is a form of desire, and as such impels to the appropriate action for its satisfaction. Ordinary pain, no matter how acute, does not thus impel action. The case is not a purely hypothetical one. There have been recorded in the medical books many cases in which all sense of taste was wanting,

and the temporary loss of appetite is a common occurrence. Some cases have been brought to light in which this state was chronic, and strenuous efforts were made artificially to introduce into the apathetic body sufficient nutritive material to sustain life. But it is obvious that in any but such exceptional cases, situated in the midst of an environment of intelligence and scientific skill, such a condition would speedily result in death, and that without the aid of natural appetite no creature, however intelligent, scientific, or skilled, could persist. *A fortiori*, no inchoate and undeveloped being could survive under such circumstances. If any such creatures have by chance been produced they must have immediately perished and left no record of their evanescent career. This alone is adequate to account, on sound, scientific principles, for the existence of the sensation of appetite. If, in the infinite number of devices which we may conceive Nature to have tried in her effort to discover a protective principle no such quality had been found, there could have been no animal world.

It would be easy to carry this reasoning much farther and to show that the principle applies equally to every other form of desire. Indeed, it is the only conceivable explanation of the fundamental phenomenon of feeling of whatever kind. Pleasure and pain are simply devices of Nature for the preservation of such organic beings as have no other adequate means, and the existence of a sen-

tient world is its natural result. Desire is that form of remembrance, either original or inherited, of pleasurable sensations which prompts the acts necessary to their repetition, and from the manner in which it has originated as a condition to survival, the satisfaction that results is that which maintains life. Pain, though, as it is now easy to see, a fundamentally different thing, and not in any proper sense the opposite of pleasure, had a similar origin, and the class of negative forces last considered result from the device called pain, which all creatures susceptible of it instantly fly from, and thus preserve their existence. Such is the scientific solution of the problem of evil which has been so long discussed without reaching any satisfactory answer. It is not a moral problem at all, but a biological or psychological one, and is exceedingly simple. To live is to suffer, as the pessimists assert, but to the sociologist the problem is how to minimize the amount of suffering and magnify the volume of life. He is on strictly scientific ground. The problem is a practical one, and although the complete abolition of pain, like that of friction in machinery, is in the nature of things impossible, still, approaches toward it, in the one case as in the other, may be and are continually made.

These two innate tendencies or impulses of human nature, to escape destructive influences and to seek nutritive substances, constitute the preservative forces

of society. They are universal, invariable, and reliable, quite as much so as the physical agencies with which mechanical science deals. Sociology must build upon them as physics builds upon the laws of gravitation, heat, light, or electricity, and only thus can sociology become a science.

Forces of Race Continuance. — There is no difference in the principle underlying the preservative and the reproductive forces. Independently of the fact above referred to that the latter in the last analysis prove to be only a mode of the former, we see that the law of advantage must secure the one as much as the other. In all the higher forms of animal life, and emphatically in man, the reproductive force is, like the preservative, an appetite, and its strength is as much greater than other appetites as the function is more imperative. It is equally universal, invariable, and reliable, and upon it as a true natural force sociology can build with perfect safety.

Under the influence of intellectual development, which, as we saw in the fourth chapter, is attended by a corresponding increase in man's sympathetic nature and in his æsthetic tastes which shape his ideals, this mainspring of race preservation becomes spiritualized and permeates society in the form of a refining and ennobling influence, which, although far more powerful than the primary appetite, is infinitely more complex and subtle, and hence becomes a much more difficult agent for the sociologist

to handle. Philosophers have therefore fought shy of it and abandoned it to the poets and romance writers. This field is therefore almost wholly new to science, and any one who attempts to enter it from the scientific point of view is sure to be looked upon with suspicion. He will usually be regarded not only as having departed from the scientific method but as displaying a diseased mind. But this is not necessary. It is possible to deal with this subtle force in a scientific way. In fact, sociologists must do this or leave out of view one of the leading factors of the science. This transformed and transfigured agency in advanced societies must be recognized and appreciated at its full value. For the sociologist love is not a sentiment in the popular sense; it is a *principle*. It is the second, if it is not the first, of the great powers that propel the social machinery.

Forces of Race Elevation. — The two classes of forces thus far considered are absolutely essential to life. Failure either to preserve the individual or to continue the race would equally bring society to an end. Man's mental or spiritual wants are not thus imperative. From the standpoint of function the forces of race elevation are not essential. But from the present standpoint, viz., that of feeling, and also at the same time that of social advantage, they assume an even greater importance. It was shown in the fifth chapter that they contribute the larger share of the volume of social good; that

while their "necessity" is less their "utility" is greater. The point of view of that chapter was that of the individual, but this is equally true from the point of view of this chapter, which is that of society. The efforts put forth to secure the higher order of individual good at which they aim result in a correspondingly higher order of social good. The good sought by the lower impulses has for the most part only a statical value. Although the efforts put forth necessarily, though unconsciously, produce change and progress, still this is small from the very fact that it is unconscious. The higher impulses, on the contrary, set up for themselves conscious ideals, æsthetic, moral, intellectual, and pursue them till they are attained. They are therefore chiefly dynamic.

Here is perhaps the place to bring forward one of the most far-reaching laws in the domain of sociology, viz., that the relative value of feeling and function is not a fixed but a variable quantity, and that throughout organic evolution this ratio increases in favor of the former. More precisely stated, the law is that while function is fixed, feeling increases somewhat in proportion to development. It would be easy to illustrate this in the lower orders of life where everything seems to be subordinated to function, and nature seems wholly indifferent to feeling. In biotic progress it is obvious that the capacity for both pleasure and pain increases with the advance in structure. The truth

is exemplified even in cases of degeneration where the opposite obtains. But it is still more apparent in man, where the psychic and especially the intellectual element so largely enters in. All that was said in the fifth chapter relative to the object of man and that of nature applies at this point. There has been a steady rise, as it were, in the price of life. The lowest savages value life at a very low figure and throw it away on the slightest provocation. The value put upon human life is one of the safest tests of true progress. The gradual abolition by the most advanced nations of the so-called code of honor is one among many of the signs of this advance. Even the dying out of the spirit of martyrdom, regarded by many as a mark of moral degeneracy, is, on the contrary, an assertion of the growing value of life, and as such is a step forward.

But it is not life alone that is valued; it is rather what life affords. The primitive man is not only indifferent to life, but he is also indifferent to pain, as witness the horrible mutilations to which savages so often voluntarily submit, as we are told, without manifesting the usual reflex movements which even the thought produces in us. Here, of course, comes in the principle of *anticipation* which I have discussed in the fourth chapter. The savage, like the animal, lives chiefly in the present, and does not suffer the acute pains which a developed imagination enables the more refined organizations to represent in advance to the mind.

But most important of all is the growing sense of *good* which equally characterizes the progress of intelligence. Not merely does man more and more value life and shrink from pain, but he progressively enhances his estimate of enjoyment, and properly so. This is to him the only good, and having been developed as a correlate of function it is safe in the long run to trust it as the expression also of universal or cosmical good — or, if any prefer, of divine good. It has served this purpose well thus far, and upon those who deny it this function rests the burden of proof. What specially concerns the sociologist is the fact that with the development of the race more and more attention has been devoted to attaining the satisfactions of life, until these become in the most advanced societies the real if not the avowed ends of existence.

To the credit of mankind be it said, moreover, that in all peoples at all developed, the lower satisfactions come gradually to constitute only a subordinate part of the object of existence, and more and more effort is expended in attaining those satisfactions which, though not essential to self-preservation or race continuance, possess for all elevated natures a far higher value. An ascending series of these was drawn up in the fifth chapter, and their increasing worthiness is unaffected by the proof there presented that the amount of satisfaction obtained is greater at each step as we rise in the scale. It is, moreover, remarkable that this series, arrived at

from the strictly psychological point of view as an attempt to analyze the subjective qualities of the mind, should harmonize so closely with the classification which the sociologist must make of the social forces.

CHAPTER VIII

THE MECHANICS OF SOCIETY[1]

PRIOR to the eighteenth century, when mathematics was almost the only science known, it was customary to treat all subjects under the mathematical form. Dr. Henry More, in an elaborate work, demonstrated the immortality of the soul by a series of geometrical propositions and notations, and, as is well known, Spinoza's Ethics consists of an array of Euclidean theorems, corollaries, and scholia. In those days it was supposed that if an argument on any subject whatever could be reduced to a perfect logical or geometrical form and contained no violation of the well-learned rules of reasoning, its several propositions were apodictically established.

In modern times all this is regarded as mere pedantry, and any attempt to apply mathematics to the complex phenomena of life, mind, and society is looked upon with suspicion. While all may admit that the test of exactness of any science is the degree to which its laws can be subjected to mathematical

[1] *American Journal of Sociology*, Vol. II., No. 2, Chicago, September, 1896, pp. 234–254.

rules, it is generally denied that the laws of biology, psychology, and sociology can be thus subjected.

While I am one of those who have emphasized this truth, and justly condemned the ambitious propensity to give to such complex phenomena a greater precision than they possess, I have never denied that the goal toward which even the highest of them must ever tend is just that perfected stage at which their laws may be mathematically formulated. Moreover, these laws are capable of being roughly classified in this respect, and while some of them may lie beyond all hope of such a formulation, others may have nearly reached the point at which it is possible.

The basis of this classification is the generality of the laws themselves, and it is found that only the most general of them all are susceptible of any such treatment. The founder of sociology, long before he had proposed that name for the science, gave it the name of "Social Physics," which showed that he perceived an analogy between social phenomena and physical phenomena, and so far as his treatment of the subject is concerned, he might as well have called it social mechanics, for he at once subdivided the phenomena into static and dynamic, terms borrowed from the science of mechanics, a branch of pure mathematics, and being a mathematician himself, he must have known what the terms meant. All future studies have tended to confirm the justness and appropriateness of this classification. It is, however, only in their most general aspects that social phe-

nomena are capable of being thus treated in the present state of the science, and it is to such general aspects that I propose to confine myself.

The word *science* has been variously defined. Etymologically it signifies, of course, simply knowledge. But it is admitted that there may be knowledge that is not science, and the most common definition of science is "methodized knowledge." I prefer a somewhat different form of expression, which may not after all differ from this in any fundamental respect. I believe that science is properly confined to an acquaintance with the laws of phenomena, using that expression in the broadest sense. All phenomena take place according to invariable laws whose manifestations are numerous and manifold. A mere knowledge of these manifestations is not science. Knowledge only becomes scientific when the uniform principle becomes known which will explain all the manifestations. This principle is the law.

But we can go a step farther back. A law is only a generalization from facts, *i.e.*, from phenomena, but these do not take place without a cause. The uniformity which makes such a generalization possible is in the cause. But a cause can be nothing else than a force. This force acts upon the material basis of phenomena and renders it *apparent*. As all force is persistent, the phenomena it causes will necessarily be uniform under the same conditions, and will change in the same way under like changes in the conditions.

As an abstract proposition all force is one, but there are a great many fields of phenomena due to as many different general conditions under which the universal force acts. It has been the custom to speak of the action of force under such different conditions as the action of so many different forces. This is at least convenient, and so long as the law of the correlation of forces is recognized it can lead to no error.

Now, it follows from this that every true science must be a domain of force; that each science must preside over some one of these various forces, and that any field of knowledge which has not been brought under the operation of some natural force is not yet a science in the proper sense of that word. The mere accumulation of facts does not constitute a science, but a successful classification of the facts recognizes the law underlying them and is, in so far, scientific. In fact, classification is always the initial step in the establishment of a science, and the more recondite workings of the force over which it presides are discovered later. We have only to look over the history of the several recognized sciences to see ample illustrations of these principles, and I cannot now stop to undertake an enumeration of them.

If, therefore, sociology is a science, it must agree with all others in this respect, and all knowledge that is not systematized according to this principle must be ruled out of the science of society. I have

always maintained that sociology does constitute a science, capable of being submitted to this test, and if I have contributed anything to that science, it has been in the direction of pointing out the nature of the social forces and the mode of their activity. I propose briefly to recapitulate the general results which I claim to have reached in this field of research.

In the first place, the social forces are psychic. They have their seat in the mental constitution of the individual components of society. But here it is necessary to understand what the mind includes. The popular conception of mind is far too narrow. It embraces only the thinking faculty, or at most, that and the special senses. Now, suppose we try to define the several great groups of phenomena that are constantly appealing to us in the ascending order of their complexity, beginning with that of gravitation and rising through the radiant group of heat, light, electricity, etc., and the group of elective chemical affinities, to the vital group, including everything that relates to life but does not relate to mind; and then pass directly to the senses and the intellect. A glance is sufficient to show that a great group has been omitted. This lies between the vital group and the intellectual group. It constitutes the entire domain of *feeling*. This domain is distinct from the senses in the popular usage, for these do not necessarily involve conscious feeling at all. Those of sight and hearing are feelingless, and

even that of touch, sometimes called the sense of feeling, need not involve feeling, and its value as a sense, *i.e.*, as a means of furnishing the mind with a knowledge of the nature of the objects touched, is inversely proportional to the amount of feeling. I call this *indifferent* sensation in contradistinction to feeling proper, which I call *intensive* sensation. This latter is always either pleasure or pain of whatever degree, and it would be easy to show that it is the primary form of feeling, and that the indifferent form is secondary and of far later origin. In fact, intensive sensation — pleasure and pain — constitutes the simplest and earliest manifestation of the psychic faculty. This great field of phenomena — the domain of feeling — is not physical, chemical, or vital; it must therefore be psychic and belong to mind.

We thus arrive at the dual nature of mind. It has a great primary department of feeling and an equally great but secondary department of thought. The former I have called the *affective* side of mind; the latter its *perceptive* side. The affective department of mind has formed no part of the philosophy of mind. It has only been seriously treated under the head of moral philosophy, and thus chiefly for the purpose of warning against the power of the passions. It has been regarded as something gross and impure, and wholly unworthy of a place in any scheme of philosophy.[1]

[1] James, *Principles of Psychology*, II., 9.

But in quite recent times, under the stimulus of modern ideas of biology, the conception of the biological origin of mind has begun to work a change in the prevailing habit of thought on the subject, and psychologists are coming to recognize the feelings as a department of psychology. In sociology the least reflection reveals the immense importance of this department. Indeed, it is found to constitute the true foundation upon which that science must be built, so that it may be said that "the stone that the builders refused is become the head stone of the corner." The secret of all this is that it is in the affective side of mind that the forces of society are found to lie. Feeling is a force. It is the only psychic force, and is at the same time the fundamental social force.

The particular form under which feeling manifests itself as a force is *desire*, and the social forces consist in human desires. They are true natural forces and obey all of the Newtonian laws of motion. They are either negative — desire to escape pain — or positive — desire to secure pleasure. In either case they impel the individual to action. A convenient and highly expressive synonym for desire in its widest sense is *will*, but the word must then be used in the philosophic sense of motive, and not in the popular sense of choice. Schopenhauer based his entire philosophy on this conception, and by projecting the will into the inanimate world he showed in the clearest manner the true nature of

will as a simple mode of manifestation of the universal force. In identifying all forces with will he simply demonstrated that the human will is a force. From an economic point of view we may identify it with *want*, and contemplate the combined wants of mankind as constituting the social forces.

This conception is susceptible of great expansion. It really embraces the whole domain of feeling in the intensive sense, *i.e.*, as having to do with pleasure or pain. All instincts, affections, and emotions range themselves under it. All the "passions of the soul," of which Descartes treated, all loves and hates, fears and hopes, yearnings, longings, ambitions, aspirations, and a great variety of other forms of the one principle belong to it.[1] The central idea common to them all is embodied in the two words *impulse* and *motive*, and these terms sufficiently imply the indwelling force of the will. It is that which impels and that which moves. It is the *nisus* of nature transferred from the physical to the psychic world. It is force and motion ensouled. It is the true soul.

From the standpoint of social mechanics this embodiment of psychic and social energy becomes the *dynamic agent*. The word *dynamic* primarily and etymologically relates to force, but usage has sanctioned its extension to include that which force normally accomplishes, viz., motion, change. In the

[1] Some attempt at an enumeration of these appetitive attributes may be found in *The Psychic Factors of Civilization*, pp. 53, 61.

expression *dynamic agent*, both the narrower and the broader conceptions are involved, but in most of the other applications of the word *dynamic* it is mainly restricted to the narrower sense, and may be defined as: producing movement and change as the result of force. It is thus clearly distinguished in its scope from the term *kinetic*, employed in modern physics, which relates to motion only, without connoting force. The use of the term dynamics in the sense here indicated was first made in mechanics, and constitutes a department of that science in contradistinction to statics, in which the forces are conceived as in equilibrium, so that no movement results. The next science in which a dynamic department was recognized was geology, and latterly the term is being applied to other sciences. From the principles with which we set out it is clear that every true science must have both a dynamic and a static department. This has been sparingly recognized in biology, and distinctly so in economics by Dr. Patten, and in sociology by Comte.[1]

In treating of the mechanics of society, therefore, it is of the utmost importance to understand what constitutes social statics and what social dynamics, and how these two primary departments are to be marked off, distinguished, and recognized. First of all, it must be insisted that the terms are not used merely as smooth expressions that have a scientific sound, or as remote analogies to those of exact sci-

[1] Not by Spencer, notwithstanding his work on "Social Statics."

ence, but for what they actually mean, and in precisely the same sense that they have in pure mechanics or in solar astronomy. By this is not meant that the phenomena of society are capable of reduction to exact mathematical tests in any such degree as can be done in astronomy and physics, but merely, as already pointed out, that the highest generalizations in sociology are subject to theoretical treatment as exact as the observed phenomena of the planets or of falling bodies. It may be regarded as a sort of *pure* sociology, and it certainly has a far better sanction than either the "pure morals" of Kant or the "absolute ethics" of Spencer.

Beginning, then, with social statics, it must be defined as: social forces in equilibrium. We must then seek for cases in which social forces are in a state of equilibrium, or approximately so; for in so complex a field as society nothing absolute is to be expected when actual phenomena are under investigation. A moment's inspection shows that the social forces do not always and universally result in movement, that they conflict and collide with one another, that they choke one another, and are constantly tending to bring about a cessation of motion, *i.e.*, they tend towards the state of equilibrium. The larger masses (social groups) are first brought to rest, but within these masses there goes on a sort of molecular activity by which free paths are opened for the performance of minor operations. The general result

is what may be called a social structure. In a wider sense these social *structures* may be called *institutions*. As examples of social structures proper may be mentioned the family, the clan, the tribe, the state, the church, and each and all of the innumerable voluntary associations of society. As examples of institutions may be instanced marriage, government, language, customs, ethical and conventional codes, religion, art, and even literature and science.

Society itself, which includes all the structures and institutions that may exist at any given time, together with a certain vague but general psychic integration, may be regarded as a great structure in which the social forces have to a certain extent been brought into a state of equilibrium. It is only the most general aspects of the will that are thus equilibrated, and within this great social structure there are others which in advanced societies may be classified into a sort of subordinate hierarchy of structures, along with many that are more or less coördinate.

In general it may be said that society as a whole, including all its structures and institutions, both general and special, constitutes a *mechanism*. The structures are not chaotic and haphazard, but symmetrical and systematic. They conform to the universal law of evolution which creates the spheres of space and the adapted forms of organic life. Although all this is believed to go on spontaneously and to be the normal result of purely genetic causes,

in the great poverty of language to express this process, it is almost necessary to resort to the language of teleology, which will convey no false implications to the well-informed. We may therefore say that society constitutes a mechanism for the production of results. Every social structure or institution exists for a purpose. It is necessary to guard against the mistake of confounding social statics with social stagnation. The social mechanism, taken as a whole, constitutes the social *order*, and social statics is simply the science of social order.

To regard social structures as mechanisms is a luminous point of view for the treatment of social mechanics. A machine, properly understood, is simply a device for reducing the forces it is designed to utilize to a state of equilibrium. Without the machine these forces would run to waste so far as the user of the machine is concerned. The machine checks their natural flow, and temporarily at least and theoretically, equilibrates them. In other words, the energy of nature is *stored* by the machine for the purpose of being utilized to far greater advantage and at the will of the user. This is clearly seen in the principle of the valve, of the pendulum, etc. It is really one principle and underlies the working of every mechanism. But the result is not a loss but a gain; not a diminution but an immense increase of the product of these forces. Such mechanisms are of course the work of intelligent design on the part of man, but the same is true of

the purely genetic mechanisms of natural evolution. A plant or an animal is a mechanism in this sense. It is an organic structure and represents a large amount of stored energy. It is a device for bringing a certain class of forces into equilibrium in order to increase the amount of work that can be accomplished with the same expenditure of energy. The social structures rest on the same principle. Man accomplishes more in society than out of it. The various organized groups produce more than the same individuals could produce if unorganized. Every institution increases the power of society to do work.

The work which any mechanism, whether physical, organic, or social, normally performs constitutes its *function*. If it is that which the mechanism was intended or adapted to do, it belongs to this class. The function of a cotton-mill is to make cotton goods, that of a grist-mill to make flour, etc. The function of a leaf is to transpire, that of an anther to fertilize, that of a pistil to develop seed. In animals the function of legs is to run, of wings to fly, of jaws to bite, of the stomach to digest. The function of an entire individual organism may be said to be that of protecting, nourishing, and preserving itself. That of a sexual pair or group is to reproduce its kind and continue the race. Rising to social structures we find that each has likewise its function — the particular work that it was created to perform. Society itself is organized for the pro-

tection at least of its members. Every voluntary association exists for a particular purpose which is its function. Government and the state exist for the good of society. Its protection against anti-social influences is their function. Religion and the church exist for the protection of society from assumed spiritual beings and to propitiate them. From a highly philosophical point of view they have a far deeper and more recondite function, viz., that of antagonizing the tendency to violate the laws of nature and jeopardize the existence of the race. The moral and conventional codes have a similar function to the last named. Every ethnic custom before it passes into a mere "survival" has a purpose or function and performs it. Marriage and the family have the supreme function of continuing the race. And so on, to the end of the list.

All this belongs strictly to statical sociology and shows the immense importance of the social order. But we may go a step farther. Statics is not limited merely to preservation and perpetuation. It also includes growth and multiplication. So long as the same normal function is performed by the same structure the phenomenon is statical, although the amount of the product be increased to any extent. If more spindles of the same kind are introduced into a factory whereby a greater quantity of goods is manufactured, the function of its machinery is the same. If by reason of favorable conditions an organism attains an unusual growth without any

physical modification of its organs, its function is still normal. If a species of plant or animal succeeds in multiplying its individuals without any change in its structure, it remains the same species and its condition is technically statical. So of social structures and human institutions, no matter how great the results of their functional activity, so long as they remain the same structures and the same institutions, their study belongs to social statics.

One further step might be taken before the strict bounds of statical sociology are exceeded. It is an important fact not to be overlooked that structures are at first crude and poorly perform their functions, and that they usually continue gradually to improve in quality and attain correspondingly increased efficiency. This, too, properly belongs to statics, although it would seem to involve a true progress. Great caution, however, is required in this study of the improvement in the quality of types of structure. There is always danger of overlooking the true character of structures. They are almost always composite and consist of what may be called substructures. The character of the function performed by the compound structure will depend upon the nature of its component structures. Any change in the nature of the functions is liable to be due to essential modifications in the substructures, which may leave the compound structure to all appearances unchanged. We may, therefore, really be dealing with a dynamic phenomenon without knowing it.

If this error be carefully guarded against, the general proposition that the perfection of identical types of structure is a statical phenomenon remains altogether valid, and we have as the broadest truth at which we have thus far arrived the law that all considerations of structure and function are statical. The investigation of structures is anatomy, that of functions is physiology, and in all sciences, including sociology, the study of both anatomy and physiology belongs to the department of statics.

We turn next to the dynamic aspect. We have seen that the dynamic agent resides in the feelings or affective department of mind, and it exerts its power through the myriad forms of appetitive desire constituting impulses, or impelling forces, and motives, or moving forces, all of which may be embodied under the general term will, and regarded as making up the true soul of nature, of man, and of society. I have endeavored to show how the original and unrestrained operation of these social forces causes them to collide and antagonize one another, to check and control the movements set up, and ultimately to result in definite structures consisting of mechanisms, for the equilibration of the forces and for the storage of the social energy. I have further shown that through such social structures society is enabled to systematize the work of the social forces and accomplish infinitely more than could have been accomplished without them, and that the work thus performed constitutes the function of these social

structures. All this belongs to the department of social statics.

But there is always a limit to the efficiency of any fixed mechanism, and the same agencies that caused the origination and development of these structures, from a condition in which none existed, continued to act in the same direction, which could now be none other than that of their modification and transformation into different and more efficient structures. Both the origination of structures out of the structureless condition and the modification of the type of structures already formed are dynamic phenomena. All nature is plastic and this incessant pressure of the social forces for the betterment of types of structure has resulted in an almost universal but exceedingly gradual change in these structures. The sociologist has before him the task of explaining the precise *modus operandi* of these changes. The fact to be contemplated is that while the functional effects of almost any social structure are greater than would be the effect of action without any structure, the effects of the later modified structures are greater than those of the earlier unmodified ones, and the effect of the progressive transformation of human institutions has upon the whole been that of vastly increasing their social efficiency. The same effect has attended the creation of new institutions, or the multiplication of social structures. How does this take place?

We saw that feeling was the dynamic agent, and

therefore it is here certainly that we must look for the initial impetus of all dynamic phenomena. We also saw that function (nutrition, reproduction, growth, multiplication, qualitative perfectionment) is essentially statical, and therefore it is useless to look in this direction. If, however, we examine the phenomena of function, we shall see that they are all *indirect* in the sense of not following immediately upon the act that produces them as the effect of an efficient cause. Such an act is not a *causa efficiens* but a *causa sine qua non*. In unintelligent beings it is not to be supposed that the agents that perform the acts that produce functional effects have any conception of the nature of such effects. The animal does not eat in order to nourish its body, but to satisfy hunger, nor does it perform the reproductive act in order to continue its race, but to gratify an instinct. In the human race, so far as man's animal nature is concerned, the case is scarcely different, and the most rational communities would forthwith disappear but for the impulses that indirectly lead to their preservation. These functional results are undesired. They are automatic. The will does not enter into their production. This of itself explains their statical character. Whatever is dynamic must be desired, must be due to motive, must be a product of will power. The act itself of satisfying desire is not dynamic and if no effort were required, there could be no modification of structure. It is precisely because, in the great majority of cases, effort

is necessary that transformation takes place. From the very outset there have been obstacles to the satisfaction of desire, to remove which has required greater or less effort, and it is this effort that has resulted in change.

The fact to be noted at this point is that the effect (removal of obstacles) is not, like the functional effects hitherto considered, indirect and remote, but is direct and immediate. The effort is a true efficient cause and the effect is a purely natural physical consequence of the activity. In the animal world this effect is mainly subjective. It transforms the organism, modifies organs, multiplies structures, and creates new varieties, species, genera, and even families and classes. In man it does this too, but only to a limited extent. Here the principal effects are modifications of the environment to adapt it to the organs and faculties that he already possesses, and the degree to which this takes place is proportional to his superiority over the animal. It is a measure of his psychic development, and especially of his intellectual development. The removal of obstacles to the satisfaction of desire is the underlying cause of all social progress. It transforms the social environment. It modifies existing social structures and originates new ones. It establishes institutions. It resists the repressing tendencies of obsolescent customs and codes. It inaugurates reforms, which are at bottom a sort of social exuviation. If old, hardened structures prove too obdurate, it results at length in revo-

lution. In short, it constitutes the dynamic process of society.

Social progress is either genetic or telic. Progress below the human plane is altogether genetic and is called development. In the early human stages it is mainly genetic, but begins to be telic. In the later stages it is chiefly telic. The transition from genetic to telic progress is wholly due and exactly proportional to the development of the intellectual faculty. The intellectual method is essentially telic. The intellect was developed as an aid to the will for the sole purpose of securing the more complete satisfaction of desire. It enables man to obtain by an indirect method what he could not obtain by a direct method. Through it satisfactions are multiplied and life correspondingly enriched.

On the subhuman plane the organic advances that nature accomplishes all take place according to the genetic principle. They constitute what is commonly understood as development or organic evolution. Certain writers, however, have used the term *genesis* in this, or some more or less modified sense. When we take in human evolution it becomes evident that it includes something more than is involved in the evolution of irrational beings. The moment we rise to the social sphere we encounter the telic aspect of the subject. It is still development or evolution, but a new principle, radically different from the genetic, has now been introduced, and in all the higher forms of social progress it assumes the

leading rôle. Obviously, therefore, the sociologist at least demands a terminology that shall clearly indicate this important distinction. That much of social progress consists of simple genesis there is no doubt, but the greater part of human evolution is not genesis. A term is wanted to describe this major part of social evolution. So pressing is this need that I feel justified in striving to find and introduce such a term. We already have the word teleology, formerly employed exclusively in a theological sense, but which I long ago showed to be applicable to human activity.[1] From this we have the adjective *teleological*, and these might suffice for the purpose. But there is a shorter adjective form *telic*, which is preferable to teleological and possesses the advantage of being converted into the name of a science, *telics*, as proposed by Dr. Small. These two words may be conveniently set over against *genetic* and genetics, thus greatly facilitating the expression of a large class of ideas with which the social philosopher must constantly deal. The only serious lack, then, is a similar antithetical term to be set over against *genesis*, to denote the distinctively social process which results from the application of the indirect, intellectual, or telic method. In order to supply such a term I propose to revive the Greek form *telesis*,[2] giving to it the required meaning.

[1] *Dynamic Sociology*, Vol. I., pp. 28, 29.

[2] Gr. τέλεσις. This word occurs in Drisler's edition of Liddell and Scott's Greek Lexicon, published by Harper and Brothers, in

There are two kinds of telic progress, or telesis, individual and collective. The former is the princi-

1861, but without any references to classic authors using it. It has been expunged from the later lexicons, apparently because it could not be found as a common noun in classic Greek. It occurs in Passow's large German-Greek Lexicon, where Athenaeus, a post-classic author, is credited with its use. It seems, however, that wherever it occurs in the *Deipnosophistæ* it is only as a proper name. I owe this information to Dr. A. J. Huntington of Columbian University, and Dr. Thomas D. Seymour of Yale, to whom I appealed for aid in the matter, and of whose courtesy I am glad of this opportunity to make a public recognition.

Dr. Seymour further says: "In Stephanus' *Thesaurus* it is quoted as cited in the *Anthologia Palatina*, Appendix, but I do not find it there; and the last German dictionary maker does not seem to have found it, for he gives the word, but puts a ? after it," very justly adding: "But of course we have lost so much Greek literature that no one can say that some old Greek may not have been very fond of τέλεσις!" If used at all in classic Greek it was doubtless in the primary sense of the verb τελέω, to complete, fulfil, accomplish. Still, there seems no good reason why it may not take on not only all the meanings of that verb but also all those of the noun, τέλος, from which all words containing this root are derived. That word also meant primarily an end accomplished, but it was made to serve in a great number of cognate significations. Plato used it in the sense of an end of action or "final cause," and from this have sprung all the derivatives employed by philosophers. *Teleology* was not used by the Greeks, but we find *telic* (τελικός) in the various senses of τέλος, and especially used by the Stoics in an ethical sense, *final*. Mediæval and modern writers have always felt justified in employing any of the derivatives of τέλος in the Platonic sense. The adjective τελεστικός (fit for finishing) was used in religious ceremonies in connection with the office of consecration or initiation, where it may be rendered initiative, or mystical, and some modern mystics, as Cudworth, have revived it in that sense. An Italian writer, Sig. L. Ferrarese, in a volume entitled, *Saggio di una nuova classificazione delle scienze*, 1828, has employed the word *telestics* in a sense similar to that in which Dr. Small and myself have used *telics*. The latter would seem to

pal kind thus far employed. The latter is as yet so rare as to be almost theoretical. Society itself must be looked upon as mainly unconscious. Its operations are the result of the combined activities of its individual members. But the individual is conscious and seeks his ends by the aid of all the faculties he possesses. In societies at all advanced the individual units possess a developed intellectual faculty which they employ in precisely the same way that non-intellectual beings employ their unaided conative faculties, only with vastly greater results. This mind power acting in conjunction with the will power has worked the same class of transformations that the latter accomplished alone, only it has done this on a much larger scale. This is individual telesis. It constitutes almost the only social progress that has thus far taken place.

The intellect is not itself a force, it is only a guide. Just as the desires collectively considered constitute the dynamic agent, *i.e.*, represent the forces to be dealt with in the mechanics of society, so the intellect constitutes the directive agent, and has for its function to guide the will into safe and effective channels of action. As the object is always to avoid the obstacles to the satisfaction of desire, the nature of this guidance must be to find

be the preferable form. I am indebted for the reference to Ferrarese's work to Professor George E. Vincent of The University of Chicago, but I have thus far been unable to consult the work itself. I am not aware that the word *telesis* has hitherto been revived in any modern language.

paths, as it were, around these obstacles, and therefore its method is necessarily indirect. While the psychologic character of this indirection is always the same it appears under two quite different forms. Which of these forms it will assume depends upon the nature of the obstacles with which it has to deal. The two principal classes into which the objects of the impinging environment naturally fall are the animate and the inanimate, or, from the present point of view they may better be called the sentient and the insentient. Intellectual indirection practised on sentient creatures is always in the nature of *deception*. The advantage of the agent is the opposite of that of the sentient object, or at least, is so regarded by the latter. The purpose is to circumvent the will of the creature that constitutes the obstacle. Both the agent and the victim may be either animal or man. There are therefore four possible cases: (1) animal acting on animal; (2) animal acting on man; (3) man acting on animal; and (4) man acting on man. But as the victim is usually inferior intellectually to the agent, the second case is rare or wanting, and in the first and fourth there is generally more or less inequality between the exploiting and the exploited animal or man. From the sociological point of view only the third and fourth cases, *i.e.*, those in which man is the agent, are involved. I surely need not dwell upon the familiar phenomena of the exploitation by man both of the animal world and of other men.

The psychological process involved has received a number of names according to the degree of intellectual power called forth and to the nature of the being acted upon, but there is not the slightest difference in the essential quality of the mental act. We may distinguish five ascending grades of this act which will be sufficient for the present purpose. These are: (1) low or ordinary cunning, largely aided in animals by hereditary instincts; (2) sagacity, such as is manifested by the most intelligent domestic animals, and also by the less developed human beings; (3) shrewdness, best exemplified in business transactions; (4) strategy, as practised in war; and (5) diplomacy, characterizing the intercourse of nations with one another. This group of intellectual actions, since it involves more or less pain, temporary at least, in the feeling beings exploited, represents the *moral* aspect of the principle under discussion and may be called *moral indirection.*

The other form of indirection, viz., that in which the intellect, or directive agent deals with inanimate or insentient objects forming obstacles to the satisfaction of desire, appears only to a limited degree at any stage below the human. At least, animals exercise it only by avoiding such obstacles, and never by modifying them. But man, at all stages at which we know him, and doubtless almost from the beginning of his strictly human career, has always and everywhere sought with more or less success to modify his environment and to adapt it more com-

pletely to his needs. The principle involved is in all respects the same as that by which he has thwarted the will of animals and his fellowmen. In a certain sense he may be said to be engaged in deceiving nature or exploiting the inorganic world. In circumventing the will of animals and men he is making use of all the knowledge he possesses of psychic forces. In modifying the inanimate environment he in like manner makes use of his knowledge of physical forces. It is the same faculty employed in the same way only on another class of objects.

The objects being inanimate and insentient their manipulation can cause no pain, and therefore no moral considerations are involved. Such action is innocent or *unmoral* (*amoral* or *anethical*), and this form of indirection may, in contradistinction to the moral indirection already considered, be called *physical indirection*. So, too, the terms that are applied to the various grades of moral indirection — cunning, sagacity, shrewdness, strategy, diplomacy — are not generally applied to physical indirection, although there are many etymological usages that acutely suggest the identity of principle. Cunning is often a synonym of dexterity. Art has the two derivatives, artful and artificial. From craft comes crafty. A machination becomes a machine. The usual generic term for this exercise of the intellectual faculty is *ingenuity*. An ingenious act is an invention. The product of invention is art. Art is the basis of culture and the measure of

civilization. All art is thus telic. It consists in the utilization of the materials and forces of nature. As supplemented by scientific discovery and crystallized in machinery, it constitutes the great mainspring of human progress. As already remarked, the greater part of all that has been thus far achieved has been the work of strictly egoistic individual action. The vast dynamic results have been the immediate and direct effects of this action upon the impinging environment. It was not contemplated by the individual, and so far as he is concerned, it was incidental and unintended. Still it was the necessary result of his effort to satisfy desire.

But, as has also been hinted, this individual telesis is not all that is to be expected from the human race, endowed as it is with a highly developed, and as I believe, Galton and Kidd to the contrary notwithstanding, still rapidly developing intellectual faculty. There is possible another step resulting in a social or *collective telesis*. The individual has grappled with physical forces and with psychic forces and has laid them tribute to his will. It remains for society in its collective capacity to grapple with the social forces and to render them in like manner subject to the social will. But to do this society must wake to consciousness even as the individual has done. It must develop a social intellect capable of exercising both the forms of indirection described. Society must become cunning, shrewd, strategic and diplo-

matic in compassing its own interests, but especially it must acquire ingenuity and inventiveness in dealing with the heterogeneous mass of human beings out of which it is constituted, all of whom, however, are actuated in every movement by fixed laws that it must first discover. This social intellect must imitate in all respects the individual intellect. It must even be egoistic, since its own interests are also those of its individual components, and therefore there is no possibility of injury except through failure to secure those interests.

But these propositions are too general. Let us descend to something more specific. The general result of a careful study of the alleged "social organism" results in the conclusion that the only true basis of comparison between society and an animal organism is psychical. In this comparison it is admitted even by Spencer that the true social homologue of the animal brain is to be found in human government. The social intellect, if there is to be one, must be located in the governing body of society. That such a thing is possible is obvious to any one who is capable of divesting himself of popular prejudices.

Of course, as already remarked, this is largely theoretical in the present state of society, but nothing is clearer than that the legislative body of any given state may exercise intelligence. It is supposed to do this now, and only misarchists will deny that it generally does so, albeit an intelligence of a

rather low order, as ought to be expected from a body that does not pretend to do more than represent the intelligence of its constituents, including the lowest as well as the highest, *i.e.*, a body representing approximately the average social intelligence. In a more highly developed community the degree of intelligence applied to legislation will necessarily be correspondingly greater, and, in theory at least, it may ultimately reach the level attained in the present state of society by those individuals most highly developed intellectually. As soon as the social brain shall have attained this stage of development it will begin to employ the indirect method so characteristic of the individual. It will not only display shrewdness and diplomacy, but it will also display ingenuity. A science of government will be established, based on an investigation and discovery of the laws controlling social phenomena. This, as in the physical sciences, will constitute the foundation for a genuine process of social invention. The laws made by governments are totally different from the laws of nature. They are simply applications of them. Properly viewed they are, when effective, nothing more nor less than so many inventions in the domain of the social forces. Legislation, in so far as it is scientific, is invention.

It is of course easy to see how widely this ideal legislation differs from most of the actual legislation. In the latter the intellectual method of indirection is rarely employed. Most laws are mandatory or pro-

hibitory, *i.e.*, only brute force is employed, the same as that by which irrational creatures strive to attain their ends. The inventive method consists in devising mechanical adjustments such as shall direct the forces to be controlled into paths foreseen to be advantageous. As the forces are indestructible and ever pressing, and as they will necessarily follow the lines of least resistance, they must flow along these useful paths foreordained by human ingenuity. Man would never have established art by attempting to compel physical forces to act this way or that. He not only abandons brute force but he ceases to use his own force at all and applies himself to leading, or, as it were, *attracting* the natural forces into their prescribed courses. And when the mechanics of society shall have been made in like manner the prolonged and successful study of the intelligent legislator, this method will completely supersede the present crude, unscientific and largely ineffective method, and the results for society will compare with those now attained as the highest industrial art compares with the crudest empiricism. I have called this method Attractive Legislation, the further consideration of which must be deferred to the final chapter of this work.

We thus perceive that the mechanics of society naturally falls under the two general groups of social statics and social dynamics. The first of these groups need not for present purposes be subdivided, but the second primarily dichotomizes into what, for the sake

of uniform terminology, may be called social *genetics* and social *telics;* furthermore, this last in turn assumes the two forms of individual telics and collective telics. These are the several scientific aspects of the subject. The corresponding processes which it is the purpose of these branches of the science of social dynamics respectively to study are: (1) social genesis; (2) individual telesis; and (3) collective telesis.

The entire scheme of the Mechanics of Society may therefore be formulated as follows:—

Social Mechanics, treating of the Social Forces.
  Social Statics, treating of Social Order.
  Social Dynamics, treating of Social Progress.
    Social Genetics, treating of Social Genesis.
    Social Telics, treating of Social Telesis.
      Individual Telics, treating of Individual Telesis.
      Collective Telics, treating of Collective Telesis.

CHAPTER IX

THE PURPOSE OF SOCIOLOGY[1]

THE three concluding chapters of this work will treat respectively of the three phases of social dynamics enumerated in the tabular scheme placed at the end of the last chapter, viz., (1) "Social Genesis"; (2) "Individual Telesis"; and (3) "Collective Telesis." Before passing, however, to the more detailed examination of these topics, it was thought best to introduce the very important subject of the purpose, need, occasion, or *raison d'être* of sociology. The object of this is not to formulate an answer to those who deny the existence of a social science. To such no answer would probably be satisfactory. But it is becoming more and more apparent that among those who acknowledge the possibility of the science, and who are actually contributing to its development, there are two fairly distinct schools, not only in the world at large, but even in America; and, indeed, they have already become as clearly differentiated in this country as they are abroad. While none of the adherents of either of these schools have definitely formulated any of the doctrines that

[1] *American Journal of Sociology*, Vol. II., No. 3, Chicago, November, 1896, pp. 446–463.

distinguish them, their writings differ in certain fundamental respects that are sufficient to warrant their rough classification as above stated. The fundamental difference has primarily to do with just this question as to the utility, and especially the object or purpose, of sociology.

It is difficult to select terms that will clearly indicate this difference. They might be characterized respectively as the static and the dynamic schools. The objection to these terms is that both recognize dynamic phenomena, although one of them devotes little attention to it. More correctly speaking, it recognizes social movements, but pays little attention to the forces that cause these movements. One writer has expressly objected to the term dynamic, and proposed to substitute *kinetic*, as not connoting force. There is no objection to the use of the name dynamic for the other school, as its distinguishing characteristic is the emphasis it places on the conception of forces in society, and it also recognizes conscious as well as unconscious social forces. The statico-kinetic school might also with considerable propriety be called the Spencerian school, since Mr. Spencer's sociology is marked by substantially the same characteristics, and the American writers are virtually disciples of Spencer. No one of the dynamic writers, however, would be willing to be called Comtean, because, although Comte treated of both social statics and social dynamics, and clearly differentiated them, still he can scarcely be said to

have recognized social forces, and certainly never defined their nature.

The statico-kinetic or Spencerian school does not think the time has come to attempt to indicate what the effect of social science is likely to be. It treats it simply as a branch of any one's education, as explaining the facts, phenomena, and laws of a certain field of knowledge, and trusts to the natural influence that all knowledge necessarily has in sobering opinion and modifying action. In a word, it regards sociology as a pure science, and deprecates all attempts to apply its principles. At least it impliedly denies the ability of sociologists, either as teachers or writers, to point out its applications either to students or readers, and would leave this wholly to practical men, whether in the business world or in politics.

The dynamic school, on the contrary, clearly perceiving the chaotic condition of both the industrial and the political world, and recognizing that most of the evils of society result from a lack of scientific knowledge on the part of the so-called practical men, claims the right and feels the obligation to accompany the statement of facts and the definition of laws and principles with an indication of their significance and their necessary bearing upon social affairs and movements. It is only occasionally possible to apply sociological principles to the current problems of the day. These are usually only special cases of some large class that comes under some

broad principle, and about all that can be done is to make the application of the principle to the class. If this is understood, the special cases will take care of themselves. There is therefore very little danger that the teacher of sociology will take sides on current questions and defend this or that public policy. He cares little for such questions, because he sees that if the underlying principles are understood, they will settle themselves. But if it chance that public questions arise that are broad enough to come directly under any sociological law, there is no reason why he should hesitate in such cases, any more than in any other, to make the application. Still, if he finds that deep students of sociology differ as to the application, this should be a warning to him to refrain from hastily deciding what the principle really teaches in the particular case. The sociologist always sees the application of laws to current questions. They are all grouped in his mind under the laws, and may be used as illustrations, but they are usually so superficial that he can make little use of them. He prefers to take his illustrations from past history and from the various special social and even physical sciences that furnish the data of sociology.

The distinction of the two schools as pure and applied sociology, therefore, would be convenient if it were not that the dynamic school accepts the pure stage as fully as the static school. The real difference is that the former carries the science farther than the latter. From a merely passive science it

pushes it forward into an active science. It renders it constructive.

In addition to the above reasons for introducing into this volume a paper on the purpose of sociology, there is a personal one which it seems necessary to state in order to make my own position clear. In *Dynamic Sociology* I of course placed myself squarely upon the constructive ground. The advanced position there taken was open to criticism, as I expected it to be, but in addition to adverse criticism, which I desired and courted, I observed some tendency to make too much of the doctrines I advanced. This was especially the case with the principle of conscious social action. I had repeatedly stated that society thus far must be regarded as in the main unconscious, and therefore the whole idea of social action for the sake of improvement was an ideal which simply followed from the assumption of such a train of conditions as are described in Vol. II. of that work. I did not wish to lay too great stress upon it as a present or early future possibility. When, therefore, in an article on "Static and Dynamic Sociology," which appeared in the *Political Science Quarterly* for June, 1895, I sought to draw a clear line between these two kinds of sociology, I purposely omitted all reference to what I now call collective telesis, because the distinction could be made equally clear without it, and its introduction would have weakened my argument in the minds of just those persons to whom I desired to appeal.

To this omission and my general disinclination to push this part of my social philosophy, as manifested in other popular articles, I have attributed the impression that I have observed among contemporary sociological writers that I had to some extent abandoned that doctrine. The clearest expression of this that I can readily refer to is contained in Professor Vincent's exhaustive paper on the "Province of Sociology" that appeared in the *American Journal of Sociology* for January, 1896, p. 487. Under "(*c*) The 'constructive' theory, or the projection of social tendencies into ideals for guidance," he says: "Small stands for this as one of the functions of sociology, and Ward in his early work distinctly advanced this view. Judged by his recent articles, the latter has apparently modified his position." In 1893, or ten years after the appearance of *Dynamic Sociology*, this doctrine was as distinctly reaffirmed as in the "early work." Professor Vincent does not refer to my *Psychic Factors of Civilization* in which (Part III.) this was done, and the inference seems plain that he was unacquainted with it.

It may be said that after the paper on the "Mechanics of Society" in the *American Journal of Sociology* for September, 1896, this explanation was unnecessary. It certainly was rendered so by the concluding paper of the series (No. 12, on "Collective Telesis"), but it can have done n harm to disabuse in advance the minds of any who may think that I have abandoned the position

originally taken, however little sanguine I may have been and still am of rapid progress toward such an ideal.

It may seem absurd to ask what is the purpose of any science. No one would claim that the purpose of astronomy is to assist navigation, or that the purpose of biology is to facilitate the cultivation of plants and the domestication of animals. Science is supposed to be pursued for its own sake, to increase the sum of knowledge. There is a vague idea that it is somehow a good thing to have knowledge increased, while poets and philosophers have perceived that "knowledge is power," but no one has pointed out specifically in what way knowledge operates as a power. A general comparison of peoples without science with peoples that possess science shows that science must have something to do with what we call civilization, and yet it is insisted that science is not to be pursued for any practical purpose. Indeed, the practical view of science is generally condemned, and numerous illustrations are adduced of the most important practical results flowing from studies that seemed to be perfectly useless. These cases are calculated to inspire faith in the general utility of all knowledge and have thus accomplished great good. It is of course clear to all that mathematics, physics, and chemistry have an immediate practical value in the affairs of life, but most of the other sciences — geology, botany, zoölogy, ethnology, psychology, etc. — are looked

upon mainly in the light of culture, like history, literature, fine art, etc. Anatomy and physiology constitute exceptions, as having a direct bearing upon health.

In general it may be said that as long as, and in proportion as nature is regarded as anthropocentric the knowledge of nature will not be looked upon as of any special practical use to man. The truth that is gradually taking the place of this two-fold error is that instead of nature being anthropocentric and science indifferent, nature is indifferent and science is anthropocentric. It *is* true that every step in the advance of knowledge has resulted in practical benefit to man, morally or materially, and both the philosophic ken and the popular instinct as to the usefulness of knowledge are correct. The knowledge generally understood as scientific is the most useful and practical of all kinds of knowledge. Scientific knowledge is the knowledge of nature, *i.e.*, of natural things and natural laws. In short it is a knowledge of the environment, and the reason why it is so useful is because it is his relations to his environment that man chiefly needs to know.

The environment is not wholly objective, although there is nothing that may not be contemplated objectively. The subjective environment is in some respects more important to know than the objective. Notwithstanding the old Greek maxim, "Know thyself," it is only in recent times that any adequate idea has been gained of the meaning of that maxim,

and although Pope said that "the proper study of mankind is man," still it is only since man began to be studied as a social being and as a being subject to laws as uniform as those that prevail in other departments of nature, that any useful knowledge has been acquired relative to the true nature of man. Man had been supposed to be a "free agent," which meant that there were no laws to which his activities were subject. There could therefore be no science of man, and hence no science of society. Many still so hold, and for such there is no sociology. But those who accept a science of sociology as resting like other sciences on uniform and determinable laws are able to see immense possibilities in this science from a practical point of view. The laws of nature have always proved capable of being turned to man's advantage in proportion as they have been made known, and there is no reason to suppose that those of human nature and of society will form an exception. But it is admitted that they are more complex and difficult to understand, and therefore sociology requires more study than any other science.

There are two ways in which any science may be studied, the speculative and the practical, but the sciences differ among themselves with respect to the extent to which the one or the other of these methods should be carried. As already shown, astronomy and biology, from their inherent nature, do not readily lend themselves to the practical method, but are mainly pursued for the purpose of acquiring

a knowledge of these great fields of nature. This is so specially true of botany and zoölogy that on a former occasion I used these sciences as representing that method, and called it the "natural history method."[1] In the natural history method the only *purpose* is to learn the natural history of the organism in question. This method is the one chiefly employed in nearly all the departments of anthropology, which is treated as a branch of zoölogy for the study of the human organism. Many who claim to be sociologists are accustomed to look upon human society from this point of view, and their sociology is scarcely anything but anthropology.

The science formerly called political economy, but now generally known as economics, has had a somewhat different history. Its cultivators from the first conceived it as a domain of law, but they carried this principle too far and only recognized animal impulses as actuating man in his industrial relations. These are so comparatively simple that the ruder types of men have had no difficulty in perceiving these laws sufficiently well to utilize them in the domestication of animals. This was done empirically, and what science there is on the subject has been of late development. If human activities had been equally simple, the political economy based on them would have been almost as exact as solar astronomy. What actually took place, expressed in the language of dynamic sociology, was that while

[1] Publications of the *Am. Econ. Assoc.*, Vol. VI., p. 102.

the early political economists recognized the dynamic agent they neglected the directive agent and its influence in causing *perturbations* in human activity. Or, expressed in the language of social mechanics, as set forth in the last chapter, they recognized social genesis and founded a science of social genetics, but they failed to take account of individual telesis as modifying this process. That which has been aptly called "astronomical economics," therefore failed, and it was discovered by the Newton of biology that the Malthusian principle was a fundamental principle of biology.[1] As soon as attention began to be directed to wide classes of facts it was seen that this law required to be modified in so many respects before it could be applied to man as to amount almost to a reversal of it.[2] While the philosophers were ignoring one half of mind — the feelings — the economists were ignoring the other half — the intellect — and both of these great movements were limping along in this fashion. It has remained for sociology, whether calling itself by that name or not, to recognize the psychologic basis of human activities and to found a science upon all the faculties of the mind.

The fact that the defective political economy described necessarily led to a gloomy view of human life, gaining for it Carlyle's name of the "dismal

[1] See Darwin's Autobiography in *Life and Letters*, Vol. I., p. 68.

[2] See The Psychologic Basis of Social Economics, *Proc. A. A. A. S.*, Vol. XLI., pp. 301–321.

science," has given birth to the erroneous impression that the early writers were cold, hard-hearted men, who looked upon the laborer as simply a machine to be run until it breaks down, and who had no hope that the conditions they described could ever in the nature of things be altered or improved. The fact is that those writers were all humane and enlightened men with warm sympathies. Adam Smith is now ranked among the founders of utilitarianism, which is an essentially melioristic doctrine. It is a curious fact, rarely referred to, that the very title of the great work of Malthus, which is regarded as the most pessimistic of all that class of writings, contains a clear declaration of his humanitarian purpose. Even in the first edition the title reads: An Essay on the Principle of Population *as it affects the future Improvement of Society*. The first seven words remained the same in all editions, but in the second edition the remainder reads: *or a review of its past and present effects on human happiness.* In the seventh edition (I have not been able to consult intermediate ones) these words are added to the last: *with an inquiry into our prospects respecting the future removal or mitigation of the evils which it occasions.*

This clearly shows that even Malthus wrote for a *purpose*, and that a humanitarian one. The same might be proved for many of the earlier works on political economy. A modern writer, Mr. William Cunningham, makes the following frank confession:

Economic science is wholly practical, it has no *raison d'être* except as directing conduct towards a given end: it studies the means leading towards that end not merely for the sake of knowledge, but in the hope of guiding men so that they may pursue that end in the most appropriate way: it is not content to describe the principles that have actuated human conduct, but desires to look at these principles in the light of after events, and thus to put forward the means that are best adapted for attaining the end in view.[1]

Is there any good reason why sociology may not have a purpose as well as economics? The character which chiefly distinguishes it from the physical sciences, viz., greater complexity of the phenomena to be studied, scarcely differs in these two sciences. I am myself inclined to regard Mr. Cunningham's language as somewhat too strong. I should say that economics should be studied from both points of view, first for the purpose of learning the laws of industrial activity, and secondly with a view to directing conduct to a given end. In other words, I would concede to that science, as to mathematics, physics, and chemistry, both a pure and an applied stage. But I make the same claim and no more for sociology. That science should also be studied first for the sake of information relating to the laws of human association and coöperative action, and finally for the purpose of determining in what ways and to

[1] *Politics and Economics:* An Essay on the Nature of the Principles of Political Economy, together with a Survey of Recent Legislation, by William Cunningham, London, 1885, p. 12.

what extent social phenomena may, with a knowledge of their laws, be modified and directed towards social ideals. This last is what I understand by Dr. Small's "idealics." The supreme purpose is the betterment of society. The knowledge is the important thing. The action will then take care of itself. But an important part of the knowledge is that action is its object. It was shown in the last chapter that the greater part of the action of civilized men is telic, or results from purpose and not from mere impulse. The study of sociology is calculated to enlighten the individual purposes of men and harmonize them with the good of society. It will tend to unify action, to combine the innumerable streams of individual effort and pour their contents into one great river of social welfare. Individual telesis thus verges into collective telesis. In a democracy every citizen is a legislator and government simply becomes the exponent of the social will and purpose. This becomes more and more true as the constituent members of society see things in their true light. Society can only act upon those things with regard to which there is a substantial unity of opinion. There is no more false dogma than that it is necessary for individuals to work at cross purposes. So long as many of the prevailing notions in society are false divisions and dissensions will occur, and these, I grant, are educating in the school of experience. But the greater part of them are unnecessary and disappear as communities become enlightened. The

purpose of sociology is to enlighten communities and put an end to useless and expensive dissensions. It is true that, as the simpler questions are settled, higher and more complicated ones will arise in society, but this very elevation of the plane of public discussion is one of the true marks of social advance. Those who regard partisan struggles as salutary to the intellectual vigor and independence of the people need have no fear. There are questions and questions. What the sociologist demands is simply that every question capable of definitive settlement be put out of the public arena, and that wrangling about anything that *anybody knows* cease. There will still remain problems that the wisest cannot solve, and upon these men will divide and debate and reflect and experiment until one by one they, too, reach their solution and give way to still subtler, more delicate, and more ennobling subjects of discussion and emulation.

But if the purpose of sociology is the betterment of society, it becomes necessary to inquire what constitutes social betterment. This may at first sound puerile, because everybody is supposed to know. But let any one undertake to formulate it and he will not find it so easy. When we specify civilization, enlightenment, morality, progress, etc., as the criteria of social improvement, we only multiply the number of terms requiring definition. There is really only one test of the comparative goodness, *i.e.*, the better or worse, in anything, and that is

what may be called the ethical test, viz., the degree of satisfaction that it yields. One thing is better than another if it yields a greater amount of satisfaction. It comes down to the agreeable and the disagreeable as the positive and negative states. What is more agreeable is better. What is more disagreeable is worse. The agreeable is the good. The disagreeable is the bad. Looking at the condition of society as a whole we see that this is the test of utility and the basis of economics. The positive social state is the "pleasure economy" of Patten. The "end in view" of Cunningham is the "greatest happiness" of Bentham. Social betterment is the passage out of a pain economy into a pleasure economy, or from an economy that yields only the satisfaction of physical needs to one that fills out the higher spiritual aspirations. Social progress is that which results in social betterment as thus defined, and all the other supposed ends are either simply means to this end or they are names for the various aspects of it.

Now, "social evolution" is the term commonly employed for the general spontaneous movement in the direction above indicated. There may be races that have degenerated. Empires have declined and fallen. But new races and new empires in other parts of the world, usually recruited from the *élite* of the effete ones, have simultaneously risen far higher than the first. Thus far in human history the series has been upon the whole an ascending one,

and man has slowly but rhythmically, and somewhat fitfully advanced. He has done this without the aid of either economics or sociology, in ways which it will be the purpose of the next chapter to point out. The question may therefore present itself to some minds: If social evolution goes on without science, what is the need of science except for its own sake? This question is precisely similar to another that is still sometimes asked. Recognizing the great restorative powers of the human system and the fact that under normal conditions nature tends toward health and not toward disease, what is the use of the healing art, and why not leave all to the *vis medicatrix naturæ?* The answer to both questions is generically the same, that so long as the laws of nature, either physiological or social, are not scientifically understood, there is no virtue in any form of therapeutics, but so soon as these laws in either department become scientifically known it is possible, and in strict proportion to that knowledge, to "assist nature" in its struggle against all the powers of a hostile environment. The real answer, then, to the question as to the purpose of sociology is: *to accelerate social evolution.*

In thus stating the purpose of sociology, however, I shall not, I trust, be misunderstood by being supposed to confound the purpose of the science itself with the purpose of the student in studying it. By the purpose of the science is meant the general beneficial effect that it is expected to exert upon society

at large. It is difficult to estimate the power of a body of knowledge which has once become the common property of a whole people. It is not expected that any great proportion even of the most enlightened public will have actually been at any time students of sociology at any institution of learning. The more there are of such the better, but scientific truth can happily make its way very far into the lives of all classes although received at first hand into the minds of a very few. The power of *established truth* is immense. This is chiefly because no one wants to be found ignorant of, or opposed to, that which has been proved to be true. A mere theory will make little headway, because no one will feel any humiliation in either not knowing it or not accepting it. But when the indications fairly set in that it is something scientifically demonstrated, ignorance becomes a disgrace and non-acceptance a proof of ignorance. A rivalry springs up both to know and to embrace, and thousands who have only the most meagre acquaintance with such truths openly defend them.

The history of science is full of illustrations. The profound impression which any great cosmic truth makes even upon the least instructed portion of the public is well exemplified in the discovery, or rather rediscovery of the heliocentric system by Copernicus and Galileo. Although at first antagonized by the church as contrary to Holy Writ, it was soon universally accepted and came to constitute a part of

the stock of knowledge of millions who could not follow out the simplest mathematical demonstration, clearly showing that it is not necessary to be an astronomer or a mathematician to understand laws that have taxed the brains of the ablest astronomers and mathematicians to demonstrate.

Passing to physics, not to speak of the discovery of the law of gravitation which is so closely connected with the heliocentric system, but which everybody now understands in a certain way, we may note the social effect of the establishment of the law of the conservation of energy. How profoundly it influences the life and even the conduct of all but the very lowest classes of society! Everybody realizes that the invisible powers around him have been rescued from a state of chaos and reduced to a condition of law. Add to this the inspiration it has lent to invention and the condition it has furnished for the recent strides in engineering and mechanic art.

The march of geological truth has not been less prolific of social results. The knowledge of the world that has resulted from the researches of Werner, Blumenbach, Hutton, and Lyell has exerted a moral influence that penetrates into the lowest strata of society. It has also led to the development of the resources of the earth as nothing else could have done.

The last great epoch-making truth has come through biology. The law of animal and vegetal development, of the derivation of the higher types

from the lower, of organic advance through the ages, has probably influenced the thought and action of the world in a higher degree than any other one cause. The progress of this idea is also the best illustration of the way great truths work, of the manner in which thought waves propagate themselves through the social media and light up the darkest corners of the world.

Finally, of all these truths there has now been a synthesis ; a wider law has been discovered that embraces them all, and the whole universe, from the nebulæ and remotest stars to mankind and human society, is seen to be evolving and rolling on toward some unknown goal. The law of evolution has been disclosed. Where is the eddy so hidden and sequestered in social life that it has not felt some seismic jar from this vast psychic earthquake ?

But progress in unfolding the truths of the universe has taken place in the order of their remoteness from human interests. The ones earliest brought to light were farthest from man and least useful to him. Astronomical truth was less valuable than physical, and physical than vital.

There are two great domains in which scarcely any wide discoveries have yet been made. These are the domains of mind and society. Psychic and social truth, when it shall begin to be revealed, will be far more practical than even biologic truth. The leading propositions in both these fields are to-day chiefly in the stage of theory. To exert an influence they

must be *established*. Sociologists must agree upon those that are capable of demonstration and recognize them according to their value. In the present state of the science each one is so intent on his own discoveries, or supposed discoveries, that he can scarcely take time to acquaint himself with the views of others. But society has a right to demand that everything that is true shall be made public property. The teacher in particular is bound to weigh all results impartially and to give the student an opportunity to do the same. In this way what is not true will be eliminated and what is true will be classified and each truth assigned its place in a general system.

If the great law of the conservation of energy and the correlation of forces, which has brought order out of chaos in the physical world, can be extended to the psychic and social world, at whatever sacrifice of false pride, the gain must be stupendous. If there can really be established a "dynamics of mind"[1] and a "mechanics of society," the era of speculation in these fields is over and the era of science has begun. An age of psychic and social invention and discovery must follow, ushering in an age of social machinery. The general acceptance of such a truth, if it be a truth (and if it be not, there is no social science), might ultimately have the effect to transform and unify the entire system of human government by substituting, as has been done in the physical

[1] *Psychic Factors of Civilization*, chap. xv.

world, the laws and powers of nature for those of man.

While I cannot but regard this as by far the most important of all sociological principles, I freely admit that there are many others of high utilitarian rank that simply require verification, elucidation, and elaboration. Once established they should be fully recognized, no matter how humble or obscure the source from which they may have emanated, and speedily added to the common stock of knowledge.

But aside entirely from all extravagant claims for any system, independently of the question whether any of the alleged social principles are sound, it is still safe to assert that there must be elements for a science of society, and that when these elements are detected, collated, and reduced to law, such a science will be established; and it is further beyond question that when the true science of society shall be established and accepted as other sciences are accepted, its influence on the interests of man and the destiny of the race will be as much greater than that of the simpler sciences as sociology is nearer to man and more intimately bound up with all that concerns his welfare.

CHAPTER X

SOCIAL GENESIS[1]

THE word *genesis*, unlike *telesis*, is in common use in most or all modern languages, although it is employed with different meanings. Derived from the obsolete Greek verb *γένω*, of which the reduplicate middle form *γίγνομαι* was the one chiefly in use by classic authors, it partakes of the radical signification of that verb, which is *to become*. It was probably this neuter signification which led the Greeks to prefer this middle form, and the possession by the Greek language of such a form constitutes one of its distinctive characteristics. It is something quite distinct from the passive, and the Latin *fieri* poorly represents the Greek word. A passive implies an active, and this an actor. This whole idea is wanting in the Greek middle, and a form of action is recognized which is not associated with any agent, intelligent or unintelligent. It recognizes one of the most important truths in nature, that there are processes which go on independent of any external conditioning being or thing, that are self-active, and

[1] *American Journal of Sociology*, Vol. II., No. 4, Chicago, January, 1897, pp. 532–546.

although the absence of adequate causes is not implied, those causes are conceived as inherent in the objects that are regarded as active, and the phenomena are contemplated as producing themselves. The progress of science has constantly contributed to confirm the legitimacy of this conception, and its great work has consisted in the steady transfer of one field of phenomena after another from a supposed active or passive condition to this independent middle condition, rescuing them from anthropomorphic conceptions and demonstrating the self-activity of the universe. This has gone so far that to-day all things are looked at from the standpoint of evolution, and evolution is only an expression for universal genesis.

Although genesis is sometimes translated *creation*, yet at bottom it is the precise opposite of creation (*ποίησις*). The Latin language, as already said, imperfectly expressed this middle sense by various uses of the passive voice, but modern languages, developed more under the influence of scientific conceptions, have partly supplied the defect by the almost universal use of a reflective form. The Italian, Spanish, Portuguese, French, German, and Russian languages all make extensive use of this form, and the Russian, which has many of the elements of the Greek besides its characters, resorts to this method even more than the Romance languages. The English is perhaps the poorest of all modern languages in this respect, but there are

many ways in which we are able to avoid the implication of an agent in natural phenomena. We borrow largely from other tongues and possess many terms to express simple becoming. Although there is no Anglo-Saxon equivalent in use in English for the strong German word *werden*, still the advance in scientific thought towards the conception of a self-existent, self-adjusting, and self-active universe has nowhere been greater than in English-speaking countries.

Progress in this direction has taken place somewhat in the order of the complexity of the phenomena considered, and the external agent conceived by Kepler was first eliminated from astronomical ideas. Somewhat later it disappeared from physical and chemical conceptions, and it has now nearly abandoned the field of vital activities. It still lingers in the realm of mind, and anthropomorphic conceptions are still dominant in social thinking. There is, however, in this last department, as was seen in the eighth chapter of this work, and as will be more fully shown in the eleventh, a scientific basis for the idea, in conceiving man as an intelligent agent modifying his environment. In other words, while there is no more room in sociology than in any of the simpler sciences for a theo-teleology, there does exist an anthropo-teleology[1] which becomes an increasingly important factor as intelligence advances.

[1] *Dynamic Sociology*, Vol. I., p. 28.

In the present chapter it is proposed to ignore this factor as completely as possible, and to concentrate the attention upon society as a pure becoming — as a strictly genetic product — as much so as the vegetable and animal forms on the earth's surface, or even as the world systems of space. Still, as society is an exclusive product of mind, the influence of mind cannot be omitted, and the only part of the psychic factor that can really be thought away is the social mind — the conscious agency of society itself intentionally modifying its own condition.

Dynamic sociology is the homologue in human society of development in biology. The *modus operandi* is not widely different from that of natural selection, and is, in fact, a sort of social selection. In it, however, the Lamarckian principle of individual effort is more prominent, only, as pointed out, instead of modifying to any great extent man's bodily structures, these efforts modify his environment. But the principal resemblance to which it is proposed to call attention in this chapter is the common character of both processes of going on spontaneously, or without design or thought on the part of the beings that put forth these exertions and produce the effects. This is the quality which I distinguish by the term *genetic*, and the social progress that takes place in this manner does not differ from any of the other forms of evolution, not even from inorganic evolution. For although, as in animal development, psychic forces are the chief

agents, these act spontaneously and in a sense unconsciously.

The treatment of this form of social progress I formerly denominated "passive or negative," as distinguished from "active or positive" dynamic sociology, which latter, instead of being genetic, I recognized as teleological, for which I now prefer the shorter form *telic*. The following is the definition which I then gave: —

> Passive, or negative, progress contemplates the forces of society as operating in their natural freedom, subject only to the laws of evolution in general. Here society is regarded as passive in the sense of being simply acted upon by the forces that surround it and operate within it. It is conceived as negative from the absence of any force extraneous to these regular natural forces operating in the direction of their limitation or modification. Such, it is believed, has been the nature of most of the progress thus far attained by society, as it is of all that which has taken place in the animal, vegetable, and inorganic kingdoms of nature.[1]

The concluding chapter of that volume (chap. vii.) containing over two hundred and fifty pages, is chiefly devoted to this passive or negative aspect of social dynamics (see p. 456). In the present chapter only a few of the most general principles can, of course, be treated. That work, as the name implies, was limited to this class of considerations. This was stated at the close of the volume cited:

[1] *Dynamic Sociology*, Vol. I., pp. 56–57.

It has therefore been the *movement* rather than the *status* of society, which it has been sought to explain, the causes of social phenomena and social progress rather than the condition of society itself. The status, or condition, of society is to be learned by the consideration of the *indirect*, or *functional*, effects of what have been denominated the social forces. The study of the indirect effect of the preservative forces of society would lead to an acquaintance with the nature of the objects which have been employed by man as means of subsistence — a subject only touched upon in this chapter because, if legitimate, manifestly too large for the limits of the work. The consideration of the indirect, or functional, results of the reproductive forces would lead to a discussion of the most important of all social institutions, the family — a subject which has already been ably treated by many writers. Still less could we afford to attempt a survey of the wide field of æsthetic art, the deep currents of human morals, or the intellectual condition of mankind in past ages, as would be required by a consideration of the indirect effects of the non-essential forces. These indirect, or consequential, results constitute what I have called the *objects of nature*, for securing which the desires and passions of men have been developed by the law of natural selection. As already remarked, they have no necessary or real connection with the *object of man*, which is to *enjoy*, and the harmony between the two can only be accounted for, as stated, by adaptation.[1]

I have quoted these passages to show how careful I was to draw the distinction clearly between static and dynamic sociology and to disclaim all pretension to having attempted to treat the former subject. I would not have done so if there had not been numer-

[1] *Dynamic Sociology*, Vol. I., pp. 701–702.

ous indications that certain persons, teachers of sociology in our great universities, look upon my works as practically covering the whole of that great science. I certainly deserve no such compliment, and positive harm might result, not only to the student but to the science, from perpetuating the mistake. All I have pretended to do has been, after looking over this vast field and discovering certain neglected patches, to proceed as best I could to cultivate these, leaving the larger areas to those better equipped for their culture. But I certainly did exert myself to draw the boundary lines as carefully as possible, and to show in the most fundamental way how the statical phenomena differ from the dynamical ones. Much more stress was, of course, laid upon the essential nature of dynamic agencies in society. Starting upon the basic distinction of feeling and function, I rang all the changes that could be produced upon this fundamental antinomy. Indeed, so forcibly did it strike me that I made an exception in its favor, and departed from my otherwise fixed policy of publishing no part of my philosophy in advance of the complete work, and three years before that work appeared I read a paper on "Feeling and Function as Factors in Human Development" before the section of Anthropology of the American Association for the Advancement of Science, at its meeting in Boston in 1880, reports of which appeared in the daily press,[1] and an abstract

[1] See *The Boston Advertiser* for September 1, 1880, p. 1.

prepared by myself was published in *Science*,[1] in which not only was the general principle fully stated, but a classification of the social forces was given, substantially identical with that finally drawn up and published in *Dynamic Sociology* (Vol. I., p. 472).

In the preliminary paper referred to, while full weight was given to the fundamental antithesis itself, the direct or causal nature of actions produced by the one, and the indirect or consequential nature of those produced by the other, were not specially set forth. This was subsequently worked out, and the passages already quoted sufficiently express the latter of these laws, which is the basis of social statics. The former or dynamic law was formulated in the introduction to the classification of the social forces,[2] but perhaps the clearest expression of it occurs in the treatment of the reproductive forces, in connection with which the principle comes forward with the greatest clearness, and it is stated that "the first of these classes of effects may be denominated direct or causal, the second indirect or consequential."[3]

We see, then, that the primary characteristic of genetic social progress is that it results from the actions of men that directly flow from their efforts to satisfy their desires. It is this, too, which gives it its distinctively genetic character. Genesis is becoming, and whatever is genetically produced is

[1] *Science, Original Series*, Vol. I., New York, October 23, 1880, pp. 210–211.

[2] *Dynamic Sociology*, Vol. I., p. 469. [3] *Ibid.*, p. 603.

the result of a *vis a tergo* molding it into shape by successive impacts. The impinging body is in direct and intimate contact with the one that is being molded. The change produced is gradual and the process is one of development or evolution. Social progress is in this respect analogous to organic progress, or even to cosmic progress. It is never sudden or rapid. It does not take place by leaps or strides. Increment after increment is slowly added to social as to animal structures, and in the course of ages habits, customs, laws, and institutions are changed, or abolished and replaced by others. As the object of all these activities is always the fuller satisfaction of desire, and as such satisfaction results in self-preservation and race continuance, the effect in the long run, under the ever-present law of selection, is to produce superior races. This effect, however, is biologic, or rather ethnologic. The sociologic effect is to adapt the environment, *i.e.*, to improve the conditions of existence. This is social progress, but, like organic progress, it may and does result in the extinction of deficient and the preservation of efficient races and institutions.

Reverting to the figurative expression employed in the fifth chapter, we may now perceive that just as the origin of feeling, except as a condition to function, was a matter of entire indifference to Nature, so this social progress, like organic development, is equally immaterial from the standpoint of Nature's purposes, and only useful in so far as it incidentally

compasses the furtherance of those purposes. In other words, just as Nature does not care whether desire is satisfied or not, so long as life is preserved and perpetuated, so she in like manner has no concern for this social progress in and for itself, but only in so far as it becomes a means to her ends. Still more broadly put, it is no part of the scheme of Nature to bring about change, but only to secure growth and multiplication. Everything else is extra-normal and unintended.

It certainly seems a startling proposition that social progress forms no part of the scheme of Nature, but it is true in this sense, and civilization itself belongs to the class of extra-normal products. This would of course be a futile speculation but for the important practical truth that flows from it as a corollary. This is, that man is living under a new dispensation. He has cut loose from his natural moorings and is afloat upon a great sea. He has started on a voyage in search of an Eldorado. He left the mother country against the protestations of his countrymen, and now he must, like a real hero, discover the rich land of his dreams or else he must ignominiously perish. He is too far out now on this great voyage of discovery to turn back, and therefore he can only go forward. He is therefore pushing on, and already the dim outline of the distant land is looming upon the horizon.

To drop the figure, this blind genetic progress which has, without man's knowledge or solicitude,

wrought out the civilization that we have, has nearly reached the point at which society itself will awake to collective consciousness and usher in an era of telic progress, the end and nature of which cannot now be forecast. But its object cannot be other than that which the individual man has always pursued, viz., that of turning to higher and higher use the capacity to enjoy with which Nature unwittingly, and for her own totally different purposes, originally endowed him.

Genetic progress, the blind, unconscious working of the social forces making for human perfectionment in the collective state, is what is generally understood by social evolution. Every stage of ethnic culture, from savagery to enlightenment, is a product of this genetic, unconscious social evolution. For most writers on social science this is the only kind of social progress recognized. Long before sociology was named there were many such writers. With the habits of abstract reasoning which all that passed for philosophy had encouraged, it was the practice of such writers to make use of the few facts that their education, observation, and experience had given them to work out by logical deduction from these facts, the most general laws that they were capable of formulating. Much of this reasoning was sound, nearly all of it was logical, *i.e.*, did not violate the canons of logic, and many of the conclusions reached were correct, but so narrow was the induction, and so many and important were the unknown

or neglected premises that the general fabric of their philosophy was worthless. Such was the greater part of the so-called political economy which the present age has inherited from the age that went before it. Most of the pre-Comtean sociology comes under this head. A few publicists, like Montesquieu, wrote rather from the standpoint of jurisprudence. Hobbes was the panegyrist of political power, and Malthus, although really following the same lines as Adam Smith and Ricardo, put his work into the form of a sort of philosophy.

All this, as well as the French physiocracy that preceded it and largely inspired it, had the merit at least of regarding society as a domain of law, and its chief defect was in failing to recognize a sufficient number of factors and in omitting some of the most effective ones, as we shall see in the next chapter. These men saw in human society a theater of wide general activity which proceeds from the inherent nature of man. They perceived that if men were left quite to themselves they would, in seeking their personal ends, spontaneously initiate and carry on all the industries of society. Owing to the manifest abuses of power by the ruling classes in seeking to raise revenues for their own uses, conquer other nations for their own glory, and otherwise satisfy their own greed and ambition, whereby the free flow of these natural activities was checked, industry and commerce were stifled or misdirected, and the general prosperity was interfered with and diminished, they

felt called upon to counteract these tendencies and advocate the liberation of the natural forces of society. In taking this course at such a time they accomplished a worthy purpose and inaugurated a wholesome reform.

No one denies that the unrestrained activities of the human race would work out some sort of social development. The analogy with organic evolution in the subhuman sphere is also a true one. Though qualified in its details by the differences between men and animals, even by the immense difference between the human mind and the animal mind, with a corresponding difference in the results, the principle according to which these results are accomplished is essentially the same. Those reformers who maintain that the monopolistic tendencies so prevalent in society under the apparent absence of external restraint or collective influence are peculiar to human affairs, and wanting in the lower domains of life and mind, simply betray their lack of acquaintance with those domains. In fact, the fundamental condition to biological development is monopoly. Natural selection operates on this principle exclusively. What is called the survival of the fittest is simply the monopoly of the strongest. It does not work here either in the mild manner characteristic of human society, viz., that of allowing the weaker to exist, only under conditions of reduced activity and stunted growth, but it is thoroughgoing and crushes out the unsuccessful competitors completely.

It is only paralleled in human society in those rare cases where a superior race overflows the domain of an inferior one and utterly eradicates it — does not enslave it and allow it to lead a life of subjugation, much less, as is the more frequent case, partially commingle with it and ultimately absorb it — but destroys it root and branch so that it utterly ceases to exist. This is the method of nature in the animal and vegetable kingdoms, and thus is organic evolution brought about. At least such is the tendency and frequent result, but of course the competitors are often so nearly balanced in this monopolistic power that they coexist for long periods or indefinitely.

The expressions natural selection and survival of the fittest give only the positive side of this general law. There is a negative side which brings out the nature of the law even more clearly. Selection implies rejection, and survival suggests extinction. It may be looked at as a process of *elimination*. The survival of the fit means the failure of the unfit. The selection of the strong is the destruction of the weak. The rejected vastly outnumber the selected. Throughout nature this is the law, and the result is, or has thus far chiefly been, progressive development or structural perfectionment. Up to a certain point this law must have operated on man as on the animal; the only men with whom we are now acquainted have gone beyond it, or at least greatly reduced its effects.

As already stated, sociology has nothing to do

with structural changes in man, and social development consists in modifying the environment. But even here the law of natural evolution may and does apply. Monopolistic tendencies are apparent in all social operations. They assume a great variety of forms. The self-aggrandizement of rulers is one of those forms. One of the principal mistakes of the social philosophy under discussion, and one still largely prevalent, is that of assuming that the desire to rule differs in some generic way from other desires, that it is not *natural*, and does not belong to the class of natural laws. It certainly admits of no such distinction, and must be reckoned with along with other monopolistic tendencies. And it cannot be doubted that the efforts put forth to satisfy this desire have resulted in some of the most effective steps in social evolution. To this influence is largely due the founding of great nations, and there is probably no one factor in the progress of society more potent than the crystallizing and humanizing effect of bringing great areas and vast populations under a single set of regulative agencies.

But taking for the moment the standpoint of the physiocratic school of writers referred to, and separating the natural forces of society into the two classes, which may be called industrial and governmental, let us endeavor to form an idea of what the result would be if the former alone existed. In the face of the obvious fact that if the latter class were at any moment wholly in abeyance it would im-

mediately resume operations and soon restore the existing duality of conditions, let us make a complete abstraction of all this and seek to represent to ourselves the normal result of the industrial forces working alone. Some such attitude has always been tacitly assumed by those who habitually condemn the governments of the world and conceive them to be hostile to society. These misarchists see the beneficent influences of natural law in the industrial world interfered with by what seems to them an extraneous power, which most candid persons will probably admit to be in itself, at least as commonly defined, non-progressive or only negatively progressive. But the class I refer to take a part and declare it repressive and obstructive of progress. The celebrated "parable of Saint Simon" gives perhaps the most extreme expression to this view that has thus far been uttered, but Mr. Herbert Spencer, although he would not abolish government, is unquestionably its severest modern critic, so much so that anarchistic organs openly claim him as their philosopher.

Now if we could imagine that no single member of society would for a moment think of such a thing as the formation of a governing body, and conceive of each of its members as simply pursuing his individual ends in a private way; taking possession, each as best he might, of some portion of the soil, cultivating it for his own use, exchanging his surplus products with others who, choosing as now other occupations, should produce other useful things; making con-

tracts, not indeed legal, but moral, conditioned ultimately on each one's individual power to enforce them; building cities and entering into mercantile and other kinds of business; adopting a mutually accepted medium of exchange, or carrying on a banking system based on the much-praised principle of credit and trust; establishing manufactures of all kinds and disposing of the products; building railroads and operating them without any other restrictions than those imposed by the laws of business and the conditions favorable to the maximum profits; conducting educational institutions wholly on "business principles"; each one worshiping as now in the manner he prefers; and in all other respects acting individually and without collective restraint—if we could conceive, I say, of such a state of things, we might gain a clear idea of society distinct from government. The two things are not essential to each other, at least in thought, and it would be a great gain to the sociologist to be able to separate them. Even if it be admitted that government is a necessary part of human association, it would be an advantage temporarily to abstract it just as we can abstract any other one element of association. Some, of course, will say that the things specified could not be done in such a state; that government is a condition to conducting the normal operations of society, and that the hypothesis involves the assumption of higher moral attributes than humanity possesses. Such an assumption would render the hypothesis

worthless. This, therefore, is precisely the question to be asked and answered. If it is held that without government society would defeat itself and succumb and the race disappear or lapse into a purely animal or non-social condition, then the inquiry is ended. But given the mental powers possessed by man, few will go so far. The real question therefore is: What would have been the condition of society had no government ever been framed? How many and which ones of the existing institutions and operations of society would exist, and what other ones would have been developed? These are difficult questions, but they are legitimate ones for the sociologist to raise and, as far as possible, to settle. This is especially the case at a time like the present, when able philosophers are calling in question the very *raison d'être* of government. Unquestionably these are the ones upon whom it devolves to answer these questions, but aside from all controversy it is profitable to consider them.

Assuming that society would have survived a pure state of anarchy from the beginning, it is obvious that there must have been some kind of organization. This is implied in the idea of association. Gregarious animals have no rulers or laws, but they still have a social organization. There are social forces that hold them together. So it would be with men. It is claimed with much truth that government is never the result of a desire to be governed, but always of a desire to govern. Peoples never clamor

for a ruler, but rulers rise up spontaneously and assume gubernatorial powers. If there were no ambition to rule, no desire to hold office, no love of glory, and no expectation of emolument beyond what private life affords, would the members of society ever take steps to have a government established? Perhaps not, and yet there is no doubt that many institutions would arise under such circumstances. In fact we may regard all the institutions of society except those that form a part of government as having arisen in this spontaneous way. The multitudinous forms of association that prevail belong to this class. These are all limited as to membership, which is more or less voluntary. They exist for a great variety of widely different purposes, and the same person may belong to any number of them at the same time. It is clear that these would exist even if no government existed, and the various objects of these associations would be accomplished. The primary social forces would be in full activity in a state of anarchy the same as under any form of government, and men would put forth the normal efforts to preserve, continue, and mitigate life. If, as has been assumed, human nature was what it is, the egoistic propensities would exist as now, and even if no one wanted to undertake their control, society would certainly adopt some means of holding them in check. This is proved by the way in which the citizens of frontier districts, in the absence of adequate governmental protection, deal with advent-

urers and desperadoes who disturb the peace. Vigilance committees may be regarded as incipient spontaneous governments, without any motive of ambition or emolument. So far as mere protection from anti-social tendencies is concerned, they seem to prove that government would always originate itself spontaneously. How far it would go if these motives were permanently absent seems, then, to be the real question.

It is therefore clear that society would not only exist without other government than that which would originate spontaneously from other causes than the desire to rule, but also that it would progress in some degree. This progress might be regarded as typically genetic, and the exclusive product of the normal action of the social forces directly modifying the environment in the interest of society.

I have stated this hypothetical case in order to draw the distinction as clearly as possible between genetic progress and telic progress. So large a part of even past social progress has been telic that it is extremely difficult to separate the two. Still, from a certain point of view, nearly all the progress thus far attained may be regarded as genetic. In the sense of being the result of the normal action of natural laws all of it must be so regarded.

There is a sense, then, in which society makes itself, is a genetic product, and its progress takes place under the general law of evolution that pre-

vails in all departments of natural phenomena. In organic development new principles are constantly coming in, but none of these exempts the resultant phenomena from the action of the law of evolution. That law applied to plants after each of the successive steps, sexuality, exogeny, phanerogamy, gymnospermy, angiospermy, apetaly, polypetaly, gamopetaly, insect agency, etc., had been taken, the same as before. In the animal kingdom it was not affected by the successive appearance of the several higher types of structure from moners to mammals and to man. Even the psychic faculty, the gradual growth of which resulted in an almost complete reversal, from birds upward, of the conditions that governed all creatures below and including the Reptilia, did not visibly check the onward march of organic progress, and the appearance of man with his rational faculty, while it has not wholly arrested physical development, had the effect of transferring the evolutionary forces to the social field to go on at an accelerated pace. No more has social telesis interfered with social genesis, and the telic progress which individual men have secured to society becomes an integral part of the natural evolution of the human race. We may even rise to a higher plane and take into the cosmic conception the past, present, and prospective conscious and intentional social modification, and thus bring the whole into one great scheme of social evolution.

CHAPTER XI

INDIVIDUAL TELESIS[1]

THE kind of social progress described in the last chapter as Social Genesis constitutes the greater part of what has heretofore been recognized as having taken place. Man has been looked upon as a product of nature and as having developed like other such products. Society has been contemplated as an evolution, which term is restricted in its scope to the products of natural forces acting under the various laws which have been discovered to be in operation throughout the universe. Mr. Herbert Spencer has formulated those laws more fully than any other writer for both cosmic and organic evolution.

This point of view may be regarded as a purely objective one in the sense that the products of evolution are conceived as the passive recipients of the impulses that have combined to form them, and as not themselves taking any part in the process. This view is not meant to exclude internal reactions to external stimuli, which are essential to any correct

[1] *American Journal of Sociology*, Vol. II., No. 5, Chicago, March, 1897, pp. 699–717.

idea of evolution. It does not even exclude the efforts which creatures put forth in seeking satisfaction, which is believed by Lamarckians to constitute the largest factor. All this belongs to genetic progress or evolution proper. I am, I believe, the only one who has attempted to show from a biologic, or rather a psychologic standpoint, that in restricting social progress to these passive influences, an important factor has been left out of view. This factor, I maintain, is a subjective one not found at any lower stage of development, and exclusively characterizing human or social progress. It was chiefly to emphasize this factor that *Dynamic Sociology* was written, and the second volume of that work is devoted to this task. But although the first volume was limited to setting forth the nature of the already recognized objective, passive, or negative kind of social progress as defined in passages quoted in the preceding chapter, still I did not in that volume neglect to point out the distinction and emphasize the contrast between the two kinds of social progress. Immediately following the definition of passive or negative progress that of active or positive progress is given as follows: —

> Active, or positive, progress takes place through the application to the natural forces acting in and upon society of a force external to and distinct from them. To the regular course of the social phenomena as determined by the laws of evolution, we must conceive added a new force limiting and directing these into special

channels and for special ends. Its chief quality as distinguished from other forces is *purpose*. In short, it is the teleological force, the abstract conception of which is familiar to all, having formed the basis of theological philosophy. . . . This force is regarded as *active* by reason of its direct action upon the remaining forces controlling society, while progress thus produced may be fitly called *positive*, from the purely arbitrary character of its processes and the recognition of man himself as the disposer of social events.[1]

In the initial chapter of the second volume (chap. viii.), after further contrasting genetic and teleological phenomena in general, I attempted a classification of human motives or efforts. Employing an old but excellent word revived by Sir William Hamilton, viz., *conation*, to signify human motive, I divided the methods employed in seeking the satisfaction of desire into the two classes *direct* and *indirect*. The "direct method of conation" is, of course, that employed by irrational beings and by rational ones, too, when they do not use their reason. The "indirect method" is the method of reason, and is teleological. The nature and use of this method were set forth somewhat fully. Notwithstanding all this and the stress laid throughout the work on this important antithesis, I still had reason to feel that I had fallen far short of impressing students of society with a full sense that there was a great neglected factor in the current social philosophy, and

[1] *Dynamic Sociology*, Vol. I., pp. 57, 58.

in 1884 I prepared a paper on "Mind as a Social Factor," which, after reading it before the Anthropological Society of Washington and the Metaphysical Club of Johns Hopkins University, I contributed to the British psychological journal, *Mind*.[1] In this paper I attacked the problem in a somewhat popular way, directing it more or less against the school of *laissez faire* philosophers, but bringing out certain aspects in a different light from that in which they had previously been viewed.

I continued to reflect upon the subject, and its importance grew as its varied applications and implications became apparent. At last I decided to devote an entire volume to its full elucidation, and my *Psychic Factors of Civilization*, which appeared in 1893, was the result. In this work I have passed in review the entire philosophy of mind and joined this to that of society. It is in chap. xxxiii. that I have brought forward the principal considerations that should occupy this chapter. These I shall now endeavor to epitomize as comports with the limits which the chapter imposes.

Telic progress, as the name implies, depends altogether upon that faculty of mind which enables man to pursue ends which it foresees and judges to be advantageous. A clear idea must therefore be formed of the precise nature of that faculty before it is possible fully to understand how it operates. After all I had said in *Psychic Factors* in the direc-

[1] Vol. IX., London, October, 1884, pp. 563–573.

tion of explaining the origin and nature of that faculty, which, so far as I am aware, was the first attempt that had been made to explain these on wholly natural principles, I still felt that there was more to be said, *i.e.*, that there was another way of approaching the subject and leading up to the same result, which for certain types of mind might render the explanation still clearer. I reflected a year on this new mode of treatment, and then undertook to formulate it.[1]

My purpose in this new *pugillus* was to arrive at the exact nature of final causes, as the result of a long series of cosmic steps in the direction of rendering the forces of nature and the properties of matter more efficient in accomplishing results or doing work. These several evolutionary steps were shown to have been taken by the production of as many successively more and more energetic products, whose respective forms of energy are represented by their properties, and which by the different activities manifested, produce different classes of phenomena and constitute different kinds of causes producing effects in different degrees. The following table was drawn up to exhibit all these aspects of the subject:—

[1] "The Natural Storage of Energy," the *Monist*, Vol. V., Chicago, January, 1895, pp. 247–263.

PRODUCTS	DIFFERENTIAL ATTRIBUTES			
	PROPERTIES	ACTIVITIES	PHENOMENA	CAUSES
Man	Intellect	Molar	Psychic	Final
Animals	Feeling			Conative
Plants	Life		Vital	Efficient
Protoplasm				
Organic Compounds	Elective Affinities	Molecular	Physical	
Inorganic Compounds				
Chemical Elements				
Universal Ether	Wave Motion			

This table results from an attempt "to arrange these several products of evolution in their ascending order of development, assigning to each the particular property by which it is distinguished from all below it," and to exhibit in the remaining three columns the kind of activities belonging to each product, the class of phenomena it manifests, and the nature of the cause through which it produces effects. "The universal ether is placed at the bottom of the scale as representing the most diffuse form of matter with the least power, when not concentrated, of producing effects. Next come the chemical elements, which form a class, although they might themselves be arranged in an ascending series. The inorganic compounds naturally follow the elements, and the same remark applies to them. The organic compounds differ from the inorganic still less than the latter differ from the elements, but

they belong above them, and like them, only to a still greater degree, exhibit gradations in efficiency. Protoplasm is their highest expression and spans the chasm between the chemical and the biotic planes of existence. It makes the plant possible and prepares the way for the animal. At the head of the animal series and of the entire system stands man."

Leaving out of view the physical, chemical, and purely biological aspects of the question as leading up to the psychic products and properties, I will confine myself to these latter, in presenting which I cannot do better than to quote from that article: —

> As already remarked, chemical organization ceased and biotic organization began with protoplasm. It is the only vital and psychic substance, the true life- and mind-stuff, and all further progress in focalizing and utilizing the universal energy has resulted from the organization of protoplasm so as to multiply its power. This has consisted in a series of mechanical adjustments. In the organic world protoplasm is the power while *structure* is the gearing which concentrates that power. Although protoplasm exists in every cell, the main lines through which it works are the nerves, which, in the higher organisms, consist of large trunks with numerous local reservoirs and innumerable branches permeating all sensitive tissues.
>
> In order that sensibility accomplish its purpose, the preservation of the organism, sensations must be either agreeable or disagreeable; hence pleasure and pain. The instability of protoplasm renders every part ephemeral. The entire organism is in a state of constant and rapid change of substance (metabolism), and fresh supplies

must be momentarily introduced to prevent destruction by waste. The biological principle of advantage is adequate to secure this end. The supply of tissue is attended with pleasure and the actions necessary thereto follow naturally. The same is true of reproduction, which a study of the lowest organisms shows to be theoretically only a form of nutrition. The origin of pain is even simpler. The destruction of tissues results in pain and the actions necessary to prevent it also follow naturally.

Pleasures and pains once experienced are remembered, *i.e.*, they are represented when not present, and there arises a disposition to repeat the former and to avoid a repetition of the latter. This is *desire*, and it becomes the prime motive to action. The organism necessarily acts in obedience to desire, or if there be several desires that interfere with one another, it acts in the direction of their resultant. Hence the conative faculty, or *will* so called.

Up to and including this stage the *cause* of all activity is generically the same. It is the efficient cause, the *vis a tergo*. *Motive* must be distinguished from *purpose*. Desire and will are simply motive. It is a natural force and does not differ except in degree of complication from any purely mechanical or physical force. But evolution has gone on to another stage. In much the same way as, by adopting a new method, it passed from chemical to biotic organization, it has, by making another new departure, passed from genetic to telic causation.

The direction of progress was seen at the outset to be toward the greater concentration of cosmic energy, toward making the universal force, whose quantity cannot change, perform more work. This law continues in operation to the last. Telic causation is only another way of accomplishing this end. Just as biotic organization was called in where chemical organization could go no farther, so

teleology is resorted to at the point where genesis ceases to be effective. In the last stages before this point is reached the chief agent in nature is will, but, as already stated, its action is direct, the same as mere force in any other form. The new agent differs primarily from all others in being *indirect*. The essential characteristic of the final cause is indirection.

It is a common figure to represent any force as blind. The conative force is still more frequently so characterized. Desire sees no obstacles. Love is blind and blind impulse rules the lower world. But while results are accomplished by this direct method according to the intensity of the impulse and the strength of the organism, it is evident that there is a limit to the achievements of will. Desire must go unsatisfied if its object cannot be attained within this limit of physical strength. With the advance of biotic organization desire increases more rapidly than does the power to overcome obstacles, and the number and magnitude of the obstacles to the attainment of desired ends thus rapidly increase. Any new advance must look to overcoming these difficulties and to clearing the way for the accomplishment of higher results. Still again, the biological law of advantage comes forward. The new device is the *final cause*. It consists of a mechanism for the utilization of force that is running to waste, and in this respect the economic principle of all evolutionary progress is employed, but the application of this principle is wholly unlike any hitherto made.

The conative power was seen to reside in an organized nervous system with an increasing integration of its parts in subordination to a general directive center, the brain. The physical progress continued to all outward appearances unchanged except in degree in passing from the conative state which is genetic into the noetic state which is telic, but by insensible degrees a new psychic

faculty was evolved. This new psychic faculty in its developed state is called the *intellect*, but it had its nascent and inchoate stages, which, though the same in essence, scarcely deserve that name. The name, however, is unimportant. It is only needful to understand its nature.

Its physical nature may be safely said to be unknown. A theory is that there takes place within the substance of the brain a miniature reproduction of the entire panorama displayed by the external world to the organs of special sense, which register all impressions and preserve them for future comparison and use. The mind itself thus actually *feels*, or, as it were, *sees*, not only all that is presented to the senses but all that has been so presented in the past, or so much of it as it has the power to retain. The simultaneous felt presence of so many impressions renders it possible to make comparisons and recognize differences and samenesses. It thus declares agreements and disagreements, which constitute the basis of all *thought*. Agreement of wholes is identity, agreement of parts is similarity. These are the fundamental relations, but there are many kinds of relations, and the intellectual process *per se* is the *perception of relations*.

How, then, does this simple faculty of perceiving relations become a new power in the world for the storage and use of the universal energy? What is the precise form of indirection that so greatly multiplies the effect produced? Is there anything essentially new in the nature of the force constituting a final cause? To the last of these questions a negative answer must be given. There is only one *genus* of cause in the sense of a force, and that is the direct impact. The difference between efficient and final causes must be sought in the mode of their application. While the final cause, as its name implies, is inspired by an end in view, it is in reality not

directed toward that end. In mere motive or will, unaided by the intuitive faculty, the force of the organism is so directed, but for want of this faculty it may fail to attain it. The telic power differs essentially from the conative power in being directed not to the end but to some *means* to the end. Intelligence works exclusively through means, and only in so far as it does this does it employ the final cause. Instead of seeking the thing desired it seeks some other thing, unimportant in itself, whose attainment it *perceives* will secure the thing desired. This is the essence of intellectual action and all that constitutes a final cause. It is the process of converting means into ends. It thus becomes necessary that the means be *desired*, otherwise there is no *force* for the accomplishment of results. So far as the pursuit of the means is concerned the action is purely conative and does not differ from that which pursues the end directly. The whole difference consists in the *knowledge* that the end will follow upon the means. A final cause, therefore, stripped of its manifold concomitants which so obscure its true nature, consists in the pure intellectual perception that a certain end is attainable through a certain means. But this is simply saying that in and of itself it is not a cause at all. Knowledge is merely a *guide* to action. Intellect is a directive agent and can no more be called the cause of the result accomplished than the rudder can be called the cause of the progress of a boat.

There are all degrees in the amount of indirection involved in teleological action, from a mere *détour* necessary to avoid an obstacle to the highest feats of engineering, in which each separate part, say, of a Ferris wheel, must be wrought and put together to make the perfect structure which exists in the mind before the first step is taken. In this latter illustration every effort put forth from the beginning to the end is a direct conative act applied to a

means. But the work as a whole is telic, the end being constantly in view. And such is the nature of the entire course of material progress achieved by man. It is by this that he is primarily distinguished from the rest of nature. The human intellect is the great source of telic activity. The works of man are the only ones with which we are acquainted that proceed in any considerable degree from final causes. But if there be any other source of final causes, the process must always be the same — efficient causes applied to means.

It was observed at the outset that in the case of genetic phenomena, *i.e.*, of efficient causes, the effect, if the impinging bodies are inert, is always exactly equal to the cause. This is also true of final causes, so far as their action upon the means is concerned, but the *final* effect, if it can be so called, is usually much greater than the cause or effort expended. Wherein consists this difference? How has the force exerted acquired this increased efficiency? The answer is easy. The final cause is the mind's knowledge of the relations that subsist between the means and the end. But the chief of these relations, and the only practical one, is the action of other natural forces outside of the agent's will-power or muscular strength. What the mind sees is that such forces exist and are operating in certain directions. What the intelligent agent does is to place the thing he desires but lacks the power to move into the current of such a force which moves it for him. This is the type of teleological action. It is illustrated in its simplest form by the lumberman who puts his logs into the river and lets the current float them to their destination. But the most complicated cases may, by proper analysis, be reduced to this simple principle. Teleology is essentially the utilization of natural forces, causing them to do what the agent perceives to be useful and wills to be done. The applications

of wind, water, steam, and electricity are this and nothing else. All machinery falls into the same class. Civilization in all its material aspects is but the expression of this truth.

I have dwelt thus at length upon the mind side of the general principle of telic progress because I consider it to be the most important principle in the whole domain of social science, almost entirely neglected hitherto, and because it is essentially a psychological principle which cannot be understood in its sociological aspects until its psychological aspects are firmly grasped.

It is here that the principles laid down in the eighth chapter find their application. It is not proposed to restate these principles, but as they lie at the very foundation of all social progress, they require some further illustration than was there given. Indirection was classified under two heads, moral and physical, both of which, but especially the second, require fuller treatment.

Following out the line of the first of these classes of actions, viz., those expended upon sentient beings, we find that the intellect, as the repository of the telic force, first subjugates the animal kingdom and brings it under the power of man so that he can make any use of it that he pleases; then it exerts itself upon men, and one man or class of men seeks to render other men subservient to self. Both of these operations involve deception. The general term for the form of deception practised on ani-

mals is *cunning*. The cruder efforts to make one man serve another go by the same name, but the higher and more refined methods of the intellect are called tact, shrewdness, strategy, and diplomacy. In every case it is a form of deception.

It must be remembered that the intellect or telic power was developed as an aid to the will for the better satisfaction of desire. But for its value as such it could not have come into existence under the biologic law of advantage. It is as much a product of that law as any useful organ in an animal or a plant. Its supreme utility accounts for its rapid development, and for the fact that the race in which it first appeared in a marked degree soon gained an ascendency over all other races. The lower kingdom became an easy prey, but when mind became pitted against mind, and the great battle of the giants began, higher and higher generalship was developed until there was produced what we commonly call the competitive system on which modern society rests.

I have been in the habit of characterizing the telic or intellectual process or principle, as I have endeavored to define it, as the *law of mind*, in contradistinction to the process or principle according to which evolution in general takes place, which I call the *law of nature*. I do not mean by this to say that the law of mind is not also a natural law, but it certainly is utterly unlike the other law, and as it came forward at a late stage in the history of cosmic

evolution, it seems to have inaugurated a wholly new order of things. Schopenhauer declares that the intellect, as contrasted with the eternal and universal will, is an "accident," and there is a certain amount of truth in this statement. Although, like all the rest of the extra-normal products of nature, some of which have been enumerated in previous chapters, it had a natural origin and was brought forth as a means of advancing nature's ends, still, like them, when once created it soon cut loose from its original attachments and entered upon a career of its own, independent of, and to a considerable extent antagonistic to, its primary purposes. Not only did this faculty early become the champion of feeling as against function, until to-day it threatens the depopulation of the globe, but from the outset it took it upon itself to counteract the law of nature and to oppose to the competitive system, that completely dominates the lower world and still so largely prevails in human society, a wholly different system based on rational coöperation. In dealing with the animal world the law of nature is replaced by that of reason in destroying the feral tendencies and substituting complete submission to man's will — in a word, by domestication. In this state the equilibrium previously existing between the organism and the environment is destroyed, and even the colors of the fur and feather are changed. But these are not the most important changes. By a process of artificial selection, which supplants that of natural

selection, those qualities which are most useful to man are rendered more and more prominent until most domestic animals undergo profound physical modifications in the direction of utility. These modifications are not always also in the direction of greater structural perfection so as to be in the line of natural evolution, but so far as the particular qualities selected are concerned they usually are so, and in many cases careful breeding improves the whole animal, so that man becomes a powerful ally of evolution itself. This is not disproved by the fact, upon which so much stress has been laid by certain biologists, that such improved races usually revert more or less to their original condition when human influence is withdrawn. On the contrary, this fact establishes another law of biology, viz., that natural selection does not secure the survival of the fittest in the struggle for existence. It merely fixes the exact position which each species is capable of holding in the general competition. This is always far below what it might attain if competition were removed. Exactly what man does is to remove this competition, and the immense progress that every species makes is shown in the improvement of the stock under man's intelligent care.

Considering next the effect of the telic power directed to the vegetable kingdom we perceive that substantially the same results have attended it. These are even more important here, for they in-

volve nothing less than the whole range of agriculture and horticulture. These prime sources of social existence are altogether due to the working of the intellect upon the laws of vegetable life. One of the first manifestations and essential characteristics of the telic faculty is foresight, or the power to "look before" as well as after. Upon this, more than any other, agriculture depends, since the seed could only be sown in anticipation of the harvest, which is a future event.

In the vegetable kingdom, even more clearly than in the animal, is the truth apparent, to which attention was drawn, that the effect of human *telesis* is to improve the quality of the plants selected for cultivation. In the case of the cereals, for example, it is clear that this improvement is in the direction of a general structural advance. In fact it was through the study of plants that the principles I have here stated were first brought home to me. I made an attempt to formulate them over twenty years ago, and in the following words: —

> There is no . . . necessary correspondence . . . between organism and habitat, no . . . necessary . . . harmony between species and environment. This need only exist so far as is necessary to render the life of the species possible. Beyond this the greatest inharmony and inadaptation may be conceived to reign in nature. Each plant may be regarded as a reservoir of vital force, as containing within it a potential energy far beyond and wholly out of consonance with the contracted conditions imposed upon it by its environment, and by which it is

compelled to possess the comparatively imperfect organization with which we find it endowed. Each individual is where it is, and what it is, by reason of the combined forces which hedge it in and determine its very form.[1]

Recurring to the subject in 1886, I quoted this paragraph from the older paper and added : —

Since these words were written this principle has been widely recognized by botanists. It is now known that the plants of every region possess the potency of a far higher life than they enjoy, and that they are prevented from attaining that higher state by the adverse influences that surround them in their normal habitat. The singling out of certain species by man, and their development through his care into far higher and more perfect forms to supply his needs, both physical and æsthetic, further demonstrate this law. Man gives these plants a new and artificial environment favorable to their higher development, and they develop accordingly. In a word, he gives them opportunity to progress, and they progress by inherent powers with which all plants are endowed. Once, when herbarizing in a rather wild, neglected spot, I collected a little depauperate grass that for a time greatly puzzled me, but which upon analysis proved to be none other than genuine wheat. It had been accidentally sown in this abandoned nook, where it had been obliged to struggle for existence along with the remaining vegetation. There it had grown up, and sought to rise into that majesty and beauty that is seen in a field of waving grain. But at every step it had felt the resistance of an environment no longer regulated by intelligence. It missed the fostering care of man, who destroys competition, removes

[1] *Popular Science Monthly*, Vol. IX., New York, October, 1876, p. 682.

enemies, and creates conditions favorable to the highest development. This is called cultivation, and the difference between my little starveling grass and the wheat of the well-tilled field is a difference of cultivation only, and not at all of capacity. I could adduce any number of similar examples from the vegetable kingdom.[1]

I now reaffirm this principle, which has not been challenged, and assign it to its proper place in a system of sociology as one of the leading contributions of biology to that science.

It remains to consider the effect of the exercise of the telic faculty upon the physical world. Much has already been said on this point. In the domain of plant life we were already beyond the range of feeling and out of the moral world. In the domain of non-living matter we are no longer fettered by the complicated and subtle laws of life. The work of molding such products is therefore much simpler, but, as already remarked, the principle is the same. It is remarkable, when we reflect upon it, how easily nature is managed by intelligence. We have perfect passivity combined with absolutely uniform laws. It is only necessary to know the nature of matter and the laws according to which physical phenomena take place. As Comte insists, we need not know the causes of things, but only their laws. We need not ask the question *why*, but only the question *how*. This question was early asked and, for the simpler laws of matter, was correctly answered.

[1] The *Forum*, Vol. II., New York, December, 1886, p. 348.

Probably the first inventions were tools. Man is a tool-employing animal. Few have ever reflected that no animal ever uses tools, much less makes them. It is not proved that the most sagacious creatures ever increase their power to do anything by the aid of inanimate bodies within their reach, such as sticks or stones. They work *upon* such objects but they do not work *with* them. This is because a higher telic power is required in doing this than they possess. They are unable to see that the use of a club wielded, as by an ape, with the hand would greatly increase the force of a blow they might wish to inflict upon an enemy. Alleged cases of such action may be found in the books, but, so far as I am aware, none of them are authentic. Still, if such cases have been observed, this simply denotes that there are creatures below man that possess the rudiments of a telic faculty — an incipient intellect — and this I am not disposed to dispute. Tools were among man's first necessities, perhaps primarily as weapons of defence, but also as means of obtaining subsistence. Clothing and shelter even of the simplest kind could scarcely be obtained without them, agriculture was well-nigh impossible in their absence, and every form of art presupposes the means of modifying and transforming material substances. But not only in the manufacture of the tool but in its use, either in manufacturing other useful things or in carrying on any of the arts of life, the telic faculty is brought into requisition.

The sociological significance of all this lies in the corollary that only a rational being can practise economy. There is no true economy in the operation of the law of nature. It is a sort of trial-and-error process and involves enormous waste. I have endeavored to formulate what may be called the law of biologic economics, with the result that while "every creation of organic nature has within it the possibility of success," that success is only secured through the "multiplication of chances."[1]

True economy, on the contrary, is necessarily telic. Instead of going in all directions for the sake of being sure of ultimately finding the one only advantageous direction, it first looks over the ground, discovers the desired path, and pursues that and no other. This saves the expense of trying to go in all the impossible directions with the resultant failure. Yet this last is nature's method. Not only must we conceive the effort as proceeding from the centre of a circle, but we must usually conceive it as proceeding from the centre of a sphere. This is the principle that underlies the paradox upon which I have so often insisted that the artificial is superior to the natural.[2] At a later date the principle was more fully expanded in the following form : —

A closer analysis shows that the fundamental distinction between the animal and the human method is that

[1] *Psychic Factors*, p. 250.

[2] *American Anthropologist*, Vol. II., Washington, April, 1889, p. 121.

the environment transforms the animal while man transforms the environment. This proposition holds literally almost without exception from whatever standpoint it be contemplated. It is, indeed, the full expression of the fact above stated that the tools of animals are organic while those of man are mechanical. But if we contrast these two methods from our present standpoint, which is that of economics, we see at once the immense superiority of the human over the animal method. First consider the economy of time. It has taken much longer to develop any one of the organic appliances of animals, whether for war or industry, than is represented by the entire period during which man has possessed any arts, even the simplest. Look next at the matter of efficiency. Not one of the organic appliances has sufficed to enable the species possessing it to migrate far from the region to which it was originally adapted. Man, on the other hand, without acquiring any new organic adaptations, but by the invention of tools, by providing himself clothing and shelter, by artificial devices for capturing prey, and by other ways of transforming his environment, has placed himself in position to occupy the whole earth from the equator to the arctic circle, and to become the only animal that is not restricted in its habitat.

Every implement of human design is calculated to take advantage of some mechanical principle through which the muscular force necessary to be exerted is less for any given result accomplished than it would be without such implement. In most cases it is many times less, but in the great majority of cases no result could be produced at all without the implement. Machines are simply more effective tools, and it is through tools and machinery that the arts have been established. The utter helplessness of man without the arts is well illustrated by De Foe in *Robinson Crusoe*, and yet in order

to enable him to survive at all, even in a tropical climate where nature's productions were exuberant, he must provide himself from the stores of the wrecked vessel with a considerable supply of tools and other artificial appliances. What was true of Robinson Crusoe thus circumstanced, is much more true of the great majority of mankind who inhabit what we call temperate climates, *i.e.*, climates in which the temperature sometimes falls ten or twenty degrees below the freezing point. One winter without art would suffice to sweep the whole population north or south of the thirtieth parallel of latitude out of existence.

We are so much accustomed to the terms *labor* and *production* that we rarely stop to think what they really mean. Neither of these terms has any place in natural economics. All labor consists in an artificial transformation of man's environment. Nature produces nothing in the politico-economic sense of the word. Production consists in artificially altering the form of natural objects. The clothes we wear are chiefly derived from the sheep, the ox, the silkworm and a few other animals, the cotton plant, flax, hemp, and a few other plants; but between the latest stage at which nature leaves these and the final form in which they are ready for use, the steps are many and the labor great. The dwellings man inhabits once consisted chiefly of trees, clay, and beds of solid rock. These have been transformed by labor performed with tools and machinery into houses. The same is true of temples and of all the other buildings that now cover the surface of the earth wherever man is found. And so the entire cycle of human achievement might be gone through. All these transformations are accomplished through the arts.

The sum total of human arts constitutes man's material civilization, and it is this that chiefly distinguishes him

from the rest of nature. But the arts are the exclusive product of mind. They are the means through which intelligence utilizes the materials and forces of nature. And as all economics rests primarily on production, it seems to follow that a science of economics must have a psychological basis. In fact the economics of mind and the economics of life are not merely different but the direct opposites of each other. The psychologic law strives to reverse the biologic law. The biologic law is that of the survival of structures best adapted to the environment. Those structures that yield most readily to changes in the environment persist. It has therefore been aptly called the "survival of the plastic." The environment never changes to conform to the structures but always the reverse, and the only organic progress possible is that which accrues through improvements in structure tending to enable organic beings to cope with sterner and ever harder conditions. In any and every case it is the environment that works the changes and the organism that undergoes them.

But the most important factor in the environment of any species is its organic environment. The hardest pressure that is brought to bear upon it comes from other living things in the midst of which it lives. Any slight advantage which one species may gain from a favorable change of structure causes it to multiply and expand, and unless strenuously resisted, ultimately to acquire a complete monopoly of all things that are needed for its support. Any other species that consumes the same elements must, unless equally vigorous, soon be crowded out. This is the true meaning of the survival of the fittest. It is essentially a process of *competition.* The economics of nature consists therefore essentially in the operation of the law of competition in its purest form. The prevailing idea, however, that

it is the fittest possible that survive in this struggle is wholly false. The effect of competition is to prevent any form from attaining its maximum development, and to maintain a certain comparatively low level for all forms that succeed in surviving. This is made clear by the fact that wherever competition is wholly removed, as through the agency of man, in the interest of any one form, that form immediately begins to make great strides and soon outstrips all those that depend upon competition. Such has been the case with all the cereals and fruit trees; it is the case with domestic cattle and sheep, with horses, dogs, and all the forms of life that man has excepted from the biologic law and subjected to the law of mind, and both the agricultural and the pastoral stages of society rest upon the successful resistance which rational man has offered to the law of nature in these departments. So that we have now to add to the waste of competition its influence in preventing the really fittest from surviving.

Hard as it seems to be for modern philosophers to understand this, it was one of the first truths that dawned upon the incipient mind of man. Consciously or unconsciously, it was felt from the very outset that the mission of mind was to grapple with the law of competition and, as far as possible, to overcome and destroy it. This iron law of nature, as it may be called, was everywhere found to lie athwart the path of human progress, and the whole upward struggle of rational man, whether physically, socially, or morally, has been with this tyrant of nature, the law of competition. And in so far as he has progressed at all he has done so by gaining, little by little, the mastery in this struggle. In the physical world he has accomplished this through invention from which have resulted the arts. Every utensil of labor, every mechanical device, every object of design, and every arti-

ficial form that serves a human purpose, is a triumph of mind over the physical forces of nature in ceaseless and aimless competition. In the social world it is human institutions — religion, government, law, marriage, customs — that have been thought out and adopted to restrain the unbridled individualism that has always menaced society. And finally, the ethical code and the moral law are simply the means employed by reason, intelligence, and refined sensibility to suppress and crush out the animal nature of man.[1]

Such has been the influence that the telic faculty of man has exerted in all the great domains of nature, and the general result is what I understand by telic progress. The reason is therefore clear why it is necessary to insist that sociology shall from the outset recognize man as a rational being endowed with this faculty which he has exercised from the first and continues to exercise more and more. Thus far, however, it is only the employment of this faculty by the individual that has been considered. This has sufficed to subject the law of nature to the law of mind only for the individual. It has not done this for society at large. Society remains a prey to the law of nature, *i.e.*, to the competitive régime that prevails throughout the animal kingdom. The struggle has simply been raised to a higher plane to

[1] "The Psychologic Basis of Social Economics." Address of the Vice-President for the Section of Economic Science and Statistics of the American Association for the Advancement of Science, at the Rochester meeting, August, 1892. Proc. A. A. A. S., Vol. XLI., Salem, 1892, pp. 308–312.

go on as fiercely as before. This, as we saw, does not secure the survival of the fittest except in the narrow sense of best adaptation to an adverse environment, which often, as in parasitism, involves degeneracy. The power to expand always exists but is checked by competition. Individual telesis acting upon inferior organisms removes the competition, and these expansive powers immediately assert themselves, producing superior types of vegetable and animal life, and making agriculture and stock-raising the chief sources of human subsistence. Applied to men, individual telesis has the effect of creating artificial inequalities. Obeying the law of nature, it follows the uniform course of that law in producing monopoly, and, as among animals and plants, the weaker are crowded out by the stronger and the few dominate the many. The accident of position is a more potent influence here than on the lower plane and comes to constitute the leading element of strength and fitness to survive.

But it is in its application to inanimate objects and natural forces that individual telesis has displayed its chief power. The exercise of this innocent physical indirection has been the mainspring of human progress. It is not cunning, shrewdness, strategy, and diplomacy, but *ingenuity* that has inspired civilization. The exercise of ingenuity is *invention*, and invention is the basis of the practical arts. The systematic search for and discovery of the natural properties of bodies and the constant laws

according to which the forces of nature act, is *science*, and this usually has art for its end. The combined effect of science and art constitutes so nearly the whole of the material civilization of the world that for all ordinary purposes the other factors may be omitted, and we may define civilization as *the utilization of the materials and forces of nature.* The highest expression of science and art is found in machinery, and the possible improvement of machinery renders the productive power of society practically unlimited. Yet we know that there is a limit to the amount of production that society can assimilate. That limit is not one of human ingenuity, neither is it one of capacity to consume. It is a limit to the ability to obtain. The so-called overproduction takes place while men are starving, and while thousands desire, want, and even need the very products whose production must be abandoned. This has been the enigma of economists. The explanation lies in the fundamental principle of this chapter. It is the natural result of individual telesis acting under the law of nature so far as society at large is concerned. It checks production by choking circulation. It makes no provision for equitable, not to speak of equal, distribution. The monopolistic tendency of natural law, working here as everywhere, closes the smaller avenues of trade, heaps up the products in certain centers, and clogs the free flow of the social chyme before it can fairly get into the circulatory system of society.

CHAPTER XII

COLLECTIVE TELESIS [1]

THE more we study the facts, phenomena, and laws of the sentient world, the more thoroughly do we find them permeated with the idea of utility. Metaphysics asks the question, Why? pure science asks the question, How? applied science asks the question, What for? The first inquires after the causes of things, the second inquires after their laws, the third inquires after their uses. The last of these is the standpoint of all feeling beings, while the others are confined to beings endowed with high reasoning or speculative powers. The nature of utility as the term is used in both economics and sociology was considered in the fifth chapter, and in the ninth it was shown that both these sciences are utilitarian in their character, and, indeed, that all science is necessarily so. It is true that pure science takes no account of this fact and pursues truth for its own sake, but as there shown, the chief defence of this method has always rested on the essential utility of all truth, and although the sciences differ

[1] *American Journal of Sociology*, Vol. II., No. 6, Chicago, May, 1897, pp. 801–822.

widely in this respect, still it is true that every pure science has or may have its applied stage, and although sociology can perhaps afford to wait a long time yet before it attempts to justify its existence by showing what it exists for, still, sooner or later, this attempt will be made. In view of the fact that its claim to the qualities of a true science has been widely disputed, there is the more reason for it to justify that claim as early as possible, and the true test of a science is the application of its principles to some useful purpose.

The subdivision of systematic knowledge into a plurality of sciences is based on the existence of as many so-called forces, *i.e.*, so many somewhat distinct modes of manifestation of the universal force. Each science deals with a particular one of these forces, or, at least, with a group or class of more or less similar ones. Sociology, as I understand it, differs in no essential respect from other sciences except that it deals with the social forces. The telic progress of society, as reviewed in the last chapter, does not to any marked extent involve the control of the social forces. In so far as it does relate to them it is only from the standpoint of the individual who seeks to subject everything to his purposes. It was seen that the progress thus attained resulted from the intelligent direction by man of the various natural forces. This does not exclude the social forces, but the efforts described were chiefly expended upon physical, biotic, and psychic forces, the last mainly

in relation to animal domestication. The phenomena were all social in the sense of their mutual utility to the members of society, but the acts were mainly individual, each member or small group seeking personal satisfaction. They were only in a limited degree collective.

Now while, in so far as even individual action really utilizes the social forces, this constitutes an application of sociological principles, still this is not what I have intended to include under the head of collective telesis. I propose to restrict that term to the collective action of society in the direction of restraining, controlling, directing, and utilizing in any manner the natural forces of society. It is obvious, therefore, that, however much we may dislike the term (and it is a very offensive one to me), we are essentially dealing with the phenomena of *government*, since this word in a philosophical sense simply implies the organization through which society expresses and enforces its collective will. It is true that, owing to the great differences that exist among human races, due to differences of language and the vicissitudes of human history, the population of the world is now, and is long destined to remain, divided into a great number of distinct nations (not to speak of savage and barbaric tribes), each with a government of its own, so that collective social action cannot generally extend beyond the territorial limits of each national autonomy. Still, international action of certain kinds is already becoming quite extensive

and is destined to increase with the progress of civilization. Hence, when I speak of collective social action it is to be taken in the sense of national action, or at least of action on the part of nations, although a considerable number may have taken the same action. Thus defined and restricted, there remains no other essential difference between individual and social action. It also includes, however, the action of subordinate governing bodies, states, municipalities, towns, etc., deriving their powers from the general government.

It was seen that telic progress consists essentially in the process called invention, which presupposes the perception of the relations of objects and a knowledge of their properties, *i.e.*, of the uniform laws of the phenomena they present. Invention materializes itself immediately in art, and art is the basis of civilization. It is customary to say, and most people believe, that art precedes science, but this is because altogether too narrow and special a meaning is given to the word science. Science is simply a *knowing*, and this is all that the word etymologically implies. Art is exclusively the product of the knowing faculty. It is wholly telic. As I have shown, the simplest of all arts, that of wielding a stick, is impossible without a knowledge of the physical principle which makes it effective. To judge from some of the discussions of this question it might be supposed that most of the simpler arts were the result of pure accident; that they had

merely been blundered upon without any thought or knowledge. If this were so, we should find animals in the possession of arts. But this is not the case. Every art is the product of thinking, knowing, reasoning, no matter how feeble these powers may be. Between empiricism and science there is only a difference of degree. The faintest exercise of the telic or intellectual faculty is, in so far, science.

The exactly intermediate step between individual telesis and social telesis is an organization of individuals into a limited body. Such organizations are always for some specific purpose, and the word purpose sufficiently indicates their telic character. It shows that there may be a thought common to a number of persons, and that several individuals can, as well as a single one, act teleologically towards a desired end. In modern society there is scarcely any limit to the variety in such organizations. These bodies may in a very just sense be regarded as conscious and intelligent, and they conduct their operations in all essential respects in the same way that individuals conduct theirs. Even if we were to suppose such an organization to embrace all the individuals of a nation and no others, it would still differ from the government of that nation in its specific object. The supposition is, however, inadmissible, since a limited organization must be voluntary, and the inhabitants of a country include minors and infants who have no intelligent ideas of the purposes of association. If a very large and power-

ful limited organization were to coerce its members or other persons to perform certain acts, it would be usurping the sphere of government, and if this were acquiesced in it would become, in so far, *the* government. Such was the case when the Church of Rome assumed such powers.

If a small number of individuals may think and act for a common purpose, a larger number may, and there is no necessary limit until the totality of a people is embraced in the number. If such a universal organization has for its sole object the good of its members in general, it thereby virtually becomes the government. To justify this title, however, and accomplish its purpose it must assume full power, and this single act deprives it of the character of a purely voluntary association. No government can be such, although, so long as the right of voluntary expatriation exists, as it almost always has done, it is virtually a voluntary association.

Now there is a sense in which the very existence of government implies a consensus of intelligent purpose. Mr. Spencer, the severest critic of the acts of government that we have ever had, admits that all governments roughly represent the general sentiment and will of the people, and cites the failure of the commonwealth under Cromwell as an illustration.[1] He also admits that intelligence con-

[1] *Westminster Review*, Vol. LXXIII. (new series, Vol. XVII.), January 1, 1860, p. 93. *Essays, Scientific, Political, and Speculative*, New York, 1891, p. 268.

duces to association,[1] and says that "the chief prompter is experience of the advantages derived from coöperation."[2] The same idea was also expressed much earlier by him in his *Data of Ethics*,[3] and need not be further insisted upon. What specially concerns us here is the fact that even the rudest forms of government constitute a sort of collective intelligence devoted to the object of protecting society and advancing its interests. The mere circumstance that the personnel of government is made up of human beings, members of the same society, and possessing the imperfections of mankind in general, and the fact that these favored individuals often use the power which society has conferred upon them to further their own egoistic ends at the expense and to the injury of society, should not, as it so often does, cause us to lose sight of the principle and turn aside to combat the accident. Any other set of men would do the same thing, as our own political tergiversations have shown, and the only remedy is the general improvement of human character and the "eternal vigilance" of society.

On any "social organism" theory government must be regarded as the *brain* or organ of consciousness of society, and the small amount of "brains" shown by

[1] *Principles of Ethics*, Vol. II., New York, 1893, p. 31.

[2] "The Great Political Superstition," in *Social Statics*, abridged and revised; together with *The Man versus The State*, New York, 1892, p. 401.

[3] New York, 1879, p. 134.

government is simply in confirmation of the conclusion reached in the third chapter that society represents an organism of low degree. Whatever purpose government attempts to accomplish, it has to deal with the social forces, to direct and control them on the same principles that the individual applies to the other natural forces. When treating of the latter in the last chapter mention was made of the distinction between the exercise of the telic faculty on animate and on inanimate objects, and of the moral quality that enters in when the feelings, especially of men, are the objects of egoistic exploitation. This feature was not dwelt upon, as properly belonging to the present chapter, but attention was called to the fact that so great a power directed into so delicate a field became a menace to society which would become intolerable if not antagonized by the same power wielded by the collective body of society itself. This is really the strongest reason for the existence of government, and it cannot be said to have grown less with the progress of civilization. In a certain way it has grown stronger, for with the increase of intelligence the inequality in the degree to which the telic power is possessed by the individual members of society has greatly increased, and this has correspondingly augmented the ability of some to exploit others. Moreover, with this same advance in intellectual acumen the methods have changed, and open warfare, even mental, has given way to the most subtle

arts of deceiving the unwary and "making the worse appear the better reason," until the less favored members of society require to be not merely "wide awake" to their interests and perpetually on their guard, but they must be keen analyzers of human motives and philosophic students of "human nature" if they would avoid being ensnared in the sophistries of the cunning leaders and makers of public opinion. The self-seeking class, which formerly feared government which they knew existed to foil their plans, is to-day striving with Machiavelian diplomacy, and, it must be admitted, with considerable success, to enlist government itself in its service and thus to multiply its powers.

The individual teleology hitherto considered may be regarded as unconscious. The social benefits that it achieves are not thought of. They are as much accidental and unintended as are those that result from purely genetic or spontaneous activity. On the other hand, the social teleology now under consideration — the action of the central body which society creates to look after its interests — is conscious in the sense that, as a body, it always aims to benefit society, which is a conscious good. Most such action, it is true, involves very little exercise of the higher powers of mind. The decrees of a monarch are always for some purpose, but they rarely aim to accomplish that purpose indirectly. They are usually not only mandatory — thou shalt — but negatively so — thou shalt not. Little more can be

said for the great body of laws enacted by the legislatures of representative governments. That is, legislators usually employ the direct method. This is more or less successful, but always requires a physical power behind it. It is the purely empirical stage of government. As government is an application of what society knows about the nature of the social forces, it is a true art, but the condition in which we now find this art corresponds to that in which all other arts are, prior to the application to them of the wider principles of systematic science, and society may be considered to occupy the place, relatively to what it will ultimately attain, that art occupied before the era of science.

This brings us to the kernel of our subject. It may be called *the social art*. The science of society must produce the art of society. *True legislation is invention.* Government is the art that results from the science of society through the legislative application of sociological principles. In every domain of natural forces there are the four steps: First, the discovery of the laws governing phenomena; second, perception of the utilities (modes in which the phenomena can be modified to serve man); third, the necessary adjustments to secure the useful end; and, fourth, the application of all this in producing the result. The first of these steps is that of pure science; the second and third are involved in invention, and properly constitute applied science; the fourth is art in its proper sense. In taking these

successive steps there has usually been considerable division of labor. Scientific discoverers are not often inventors, and inventors rarely make the products they invent. Still, two or more of the steps are often taken by the same individual.

Now, looking at society as a domain of natural forces, we may see how readily it admits of being subjected to this series of processes. Discovery of the laws of society is the natural province of the sociologist. He should also be looked to for the detection of utilities, but this work also belongs in a still higher degree to the legislator. Adjustment is the exclusive province of legislation, and laws, when framed according to these principles, would be such adjustments and nothing else. The execution of the laws is the resultant social art. It requires no great stretch of the imagination to see how widely this scheme would differ from the corresponding features of the present régime. It is still easier to see its immense superiority. As was shown in the last chapter, the essence of telic action consists at bottom in making natural forces do the desired work instead of doing it ourselves. This is exactly what is needed in society. The desires, passions, and propensities of men are bad only in the sense that fire and lightning are bad. They are perennial natural forces, and, whether good or bad, they exist, cannot be removed, and must be reckoned with. But if society only knew how, it could utilize these forces, and their very strength would be the measure

of their power for good. Society is now spending vast energies and incalculable treasure in trying to check and curb these forces without receiving any benefit from them in return. The greater part of this could be saved, and a much larger amount transferred to the other side of the account.

The principle that underlies all this is what I have called "attractive legislation."[1] But it is nothing new or peculiar to society. It is nothing else than the universal method of science, invention, and art that has always been used and must be used to attain telic results. No one tries to drive back, arrest, curb, and suppress the physical forces. The discoverer tells the inventor what their laws are; the inventor sees how they may be made useful and contrives the appropriate apparatus; the man of business organizes the machinery on a gigantic scale, and what was a hostile element becomes an agent of civilization. The effort is not to diminish the force, but usually to increase it, at least to concentrate and focalize it so as to bring the maximum amount to bear on a given point. This is true direction and control of natural powers. So it should be in society. The healthy affections and emotions of men should not be curbed but should be directed into useful channels. Zeal and ardor are precious gifts if only they tend in the right direction, and society may profit by every human attribute if only it has the wisdom to utilize it.

[1] *Dynamic Sociology* (see index); *Psychic Factors*, p. 306.

The principle involved in attraction, when applied to social affairs, is simply that of *inducing* men to act for the good of society. It is that of harmonizing the interests of the individual with those of society, of making it advantageous to the individual to do that which is socially beneficial; not merely in a negative form, as an alternative of two evils, as is done when a penalty is attached to an action, but positively, in such a manner that he will exert himself to do those things that society most needs to have done. The sociologist and the statesman should coöperate in discovering the laws of society and the methods of utilizing them so as to let the social forces flow freely and strongly, untrammelled by penal statutes, mandatory laws, irritating prohibitions, and annoying obstacles. And here it is important to draw the line sharply between sociology and ethics; between social action and social friction.

All desire is for the exercise of some function, and the objects of desire are such only by virtue of making such exercise possible. Happiness therefore can only be increased by increasing either the number or the intensity of satisfiable desires . . . The highest ideal of happiness, therefore, is the freest exercise of the greatest number and most energetic faculties. This must also be the highest ethical ideal. But it is clear that its realization would abolish moral conduct altogether and remove the very field of ethics from a scheme of philosophy. To remove the obstacles to free social activity is to abolish the so-called science of ethics. The avowed purpose of ethics is to abolish itself. The highest ethics is no

ethics. Ideally moral conduct is wholly unmoral conduct. Or more correctly stated, the highest ideal of a moral state is one in which there will exist nothing that can be called moral.

Whether we look at the subject from the standpoint of social progress or from that of individual welfare, the liberation of social energy is the desideratum. The sociologist demands it because it increases the progressive power of society. The moralist should demand it because it increases happiness. For activity means both, and therefore the more activity the better. True morality not less than true progress consists in the emancipation of social energy and the free exercise of power. Evil is merely the friction which is to be overcome or at least minimized. . . . The tendencies that produce evil are not in themselves evil. There is no absolute evil. None of the propensities which now cause evil are essentially bad. They are all in themselves good, must necessarily be so, since they have been developed for the sole purpose of enabling man to exist, survive, and progress. All evil is relative. Any power may do harm. The forces of nature are good or bad according to where they are permitted to expend themselves. The wind is evil when it dashes the vessel on the rocks; it is good when it fills the sail and speeds it on its way. Fire is evil when it rages through a great city and destroys life and property; it is good when it warms human dwellings or creates the wondrous power of steam. Electricity is evil when in the thunderbolt it descends from the cloud and scatters death and destruction; it is good when it transmits messages of love to distant friends. And so it is with the passions of men as they surge through society. Left to themselves, like the physical elements, they find vent in all manner of ways and constantly dash against the interests of those who chance to be in their

way. But, like the elements, they readily yield to the touch of true science, which directs them into harmless, nay, useful channels, and makes them instruments for good. In fact, human desires, seeking their satisfaction through appropriate activity, constitute the only good from the standpoint of sociology.[1]

Few, of course, will be satisfied with these generalities, and many will doubtless ask for some concrete illustrations of scientific legislation. Even those who accept the general conclusions that thus logically flow from the facts of genetic and telic progress will still find themselves at a loss to conceive what definite steps can be taken to accelerate the latter, or how the central ganglion of society can inaugurate a system of social machinery that will produce the required results. This is quite natural, and the only answer that can be made is that, owing to the undeveloped state of the social intellect, very few examples of true ingenuity on the part of legislators exist. Society, as I have shown, if comparable to an organism at all, must take rank among creatures of a very low order. The brain of society has scarcely reached the stage of development at which in the animal world the germs of an intellectual faculty are perceptible. Only when spurred on by the most intense egoistic impulses have nations exhibited any marked indications of the telic power. This has developed in proportion to the extent to which the national will has coincided with the will of some influential individual.

[1] *Psychic Factors*, pp. 113–115.

Great generals in war, inspired by personal ambition, have often expressed the social will of their own country by brilliant feats of strategy and generalship, and famous statesmen like Richelieu have represented a whole nation by strokes of diplomacy that called out the same class of talents in a high degree. Even monarchs like Peter the Great, Frederick the Great, and Charles XII., not to mention Cæsar and Alexander, have made their own genius in a sense the genius of their country. In fact a ruling class in times when the people were supposed to exist for them, when a king could say "I am the state," and when revenues were collected for their personal use, often devised very cunning schemes of a national application for their own aggrandizement. But as the world threw off these yokes, and nations grew more and more democratic, the telic element declined, and the most democratic governments have proved the most stupid. They have to rely upon brute force. They are shortsighted and only know how to lock the door after the horse is stolen. They are swayed by impulse. They swarm and "enthuse," and then lapse into a state of torpor, losing all that was gained, and again surge in another direction, wasting their energies. In fact, they act precisely like animals devoid of intelligence.

All this is what we ought to expect if the principles I have enunciated are sound, and is, indeed, one of the clearest proofs of their soundness. And yet republics have not proved wholly devoid of a direc-

tive agent. Under exceptional circumstances they have displayed signs of collective intelligence. But most of the cases that can be cited have either concerned their national independence or the equally vital question of raising revenue. Nearly all the examples cited in *Dynamic Sociology* and *Psychic Factors* belong to these classes in which, in a literal sense, necessity has been the mother of invention. Any one who watches the inane flounderings of a large "deliberative" (!) body like the American House of Representatives, working at cross purposes and swayed by a thousand conflicting motives, can see how little reason has to do with democratic legislation. But for the committee system by which, to a certain extent, the various public questions become the subject of scientific investigation, it is doubtful whether the business of the country could be transacted at all. And it is only by a much greater extension of this system, perhaps to the extent of dispensing entirely with the often disgraceful, and always stupid, "deliberations" of the full House, that scientific legislation can ever be realized.

The other important direction in which there is hope of similar results is the gradual assumption of legislative powers, at least advisory, by the administrative branch, which always feels the popular pulse much more sensitively than the legislature, and to which is entrusted not merely the execution of the public will (the art of government), but also in the main the devising of means to accomplish this—

the strictly inventive function of government. If the legislature will enact the measures that the administrative branch recommends as the result of direct experience with the business world, it will rarely go astray.[1]

The examples given, in which military chieftains, diplomats, monarchs, and ruling families have employed design in national affairs, do not indicate the growth of the social intelligence or the integration of the social organism. They are merely instances of the usurpation of the powers of society by individual members. On the other hand, the tendencies in the direction of democratic government do mark progress in social integration, however feeble may be the telic power displayed. Crude and imperfect as such governments may be, they are better than the wisest of autocracies. Stupidity joined with benevolence is better than brilliancy joined with rapacity, and not only is autocracy always rapacious, but democracy is always benevolent. The first of these propositions can be disputed only by citing isolated exceptions. The second may not be so clear, yet it admits of ready demonstration. It is not necessary to postulate a different nature for the democratic legislator from that of the autocratic ruler. However self-seeking the former may be, social service

[1] The principles of scientific legislation were set forth in *Dynamic Sociology*. See especially Vol. I., pp. 36–38; Vol. II., pp. 249 ff., 395 ff., 573 ff.; and for examples of attractive legislation, see Vol. I., p. 44; Vol. II., p. 392; also, *Psychic Factors*, p. 306.

turns his egoism to the good of society. It is an example of the truth that what are called bad motives are only relatively so, and that the social forces only need to be directed to render them all good. For in seeking his own interests the representative of the people must obey their will. The will of the people must be good, at least for them. Constituencies have the same nature as representatives or kings, but whatever they will must be right from their standpoint. The good consists in the satisfaction of desire, and this can only become bad when it is secured at the expense of others. But where a constituency is in question this is not possible except in very sectional questions which cannot be discussed here. *A fortiori* must obedience to the will of a whole people be right, and therefore the representative of the people, whatever may be his personal character, is constrained by his office to do only what is right. If he fails, another is put in his place. It is thus that it comes about that representative governments are essentially benevolent, *i.e.*, they always *wish well* for the people, or, as the more common phrase expresses it, they *mean well.* And any one not prejudiced against government must see that, whatever their faults of the head, they are right at heart.

Democracy has therefore been a great step forward, and has practically solved the moral side of the question of government. Reform in the future must come from the mind side, and surely there is great

need of it. How can it be brought about? This is the problem of sociology. I have wrestled with it for many years, not in the hope of doing anything in this direction myself, but with the object of discovering, if possible, a theoretical solution to propose to the world for its consideration. The result of my reflections on this subject is given in the second volume of *Dynamic Sociology*, and although I have not ceased to revolve these matters in my mind during the fourteen years that have elapsed since the first edition of that work appeared, I cannot say that my conclusions have undergone any essential modification. I would now lay more stress upon certain parts of the general argument, and somewhat less on others, but the argument as a whole still stands as worked out in that volume. As democratic governments must be representative, I see no way to increase their intellectual status except by increasing that of constituencies, and I still regard this as the one great desideratum. If the social consciousness can be so far quickened as to awake to the full realization of this truth in such vivid manner as to induce general action in the direction of devising means for the universal equalization of intelligence, all other social problems will be put in the way of gradual but certain solution.

But there are some who will say that if this little is all there is to sustain the claim that society is one day destined to take its affairs into its own hands and conduct its business like a rational being, it

would be as well to abandon it. If the long period of human history has shown so little advance in the direction of a social intelligence, we might better leave matters entirely to the two spontaneous methods described in the two preceding chapters. The first answer to this is that the sociologist does not profess to be a reformer, and is not advocating any course of social action. All he feels called upon to do is to point out what the effect of a certain course of action would be as deduced from the fundamental principles of the science, and to state what he conceives the tendencies to be as judged from the history of development.

The second answer to this objection is that it is the one that is always raised whenever anything is mentioned which is different from that which now exists, that it is based on the natural error that things are stationary because they seem to be so, and grows out of the difficulty of conceiving a state of things widely different from the actual state. If we were to indulge in fable, a lump of inert matter would be laughed at by the other lumps if it should assert that it would one day become a graceful tree-fern, and shade the earth with its feathery foliage; a plant that should declare its intention to break away from its attachments to the soil and move about in space on four legs, feeding on other plants instead of air, would be called a vain boaster by the surrounding vegetation; a barnacle that should insist that it would one day have a backbone would be

utterly discredited by other barnacles; a bat that should fly into a dark corner of a room and escape through an opening known to be there would be called a fool by the bee that was vainly buzzing against a pane of glass in the hope of accomplishing the same object.[1] It is the "impossible" that happens. We can look backward more easily than we can look forward. Science teaches us that something has happened. Evolution proves that immense changes have taken place, and now that we can see what they were and according to what principles they were brought about there is nothing so startling in the facts. It is only when we try to imagine ourselves as present before an event and striving to forecast it that we realize the folly of raising such objections as we are considering. Yet this is our real attitude with respect to future events. It may be logical, admitting that progress is to go on and that great changes are to take place, to question whether any particular change that any one may describe is to be the one that will actually occur. There is no probability that any one can foretell what the real condition of society is to be in the future. But it is illogical, in the light of the past, of history, and especially of natural history, and of what we

[1] This point of view was never so admirably stated as in the remarkable poem by Charlotte Perkins Stetson, entitled "Similar Cases," now familiar to nearly everybody, having gone the complete rounds of the press. Also to be found in her collection of poems entitled *In This Our World and Other Poems*, San Francisco (Barry & Marble, publishers), 1895, p. 72.

actually know of evolution, cosmic, organic, and social, to say that any condition to which this knowledge points as a normal result of the continued action of the laws of evolution is impossible.

In treating the relations of sociology to the various other sciences — cosmology, biology, anthropology, psychology — in the second, third, fourth, and fifth chapters, and in the more general discussion of the position and affinities of sociology in the first and sixth, I would have been glad to institute a thorough comparison of sociology with economics, from which to many it seems so difficult to separate it. My failure to do this was not at all due to any such difficulty in my own mind, but wholly to the fact that before a comparison could be properly made it was absolutely necessary that the principles to be set forth in later chapters, and especially in the eighth and eleventh, as well as in the present one, be first laid down as the basis of any real distinction. We are now fully prepared to consider this question, but a due regard for proportion will necessarily render its treatment brief. It is therefore best to come directly to the point.

The fundamental distinction between sociology and economics is based on the difference in their respective beneficiaries. Both have utility[1] for their end, but the recipients of the utility that sociology aims to confer belong to a different class

[1] As defined in the fifth chapter, *supra*, p. 108.

from those of the utility which economics aims to confer. Broadly stated, economics may be said to benefit the producer while sociology benefits the consumer. But the term *producer* must here be taken in its widest and really proper sense of any one who by any form of labor adds anything to the value, *i.e.*, to the utility, of a product. The term *consumer*, on the contrary, must be taken in the narrower sense of the enjoyer of a product irrespective of whether he is also a producer or not. It will add to the clearness of the distinction, and will at the same time be approximately correct, if we identify the producing class with the business world in general, or the industrial world as a whole, and the consuming class with the public in general or society as a whole. The latter class of course includes the former, but, disregarding parasites, the former includes all of the latter except the helpless, whether from age, disease, or physical and mental defectiveness. It is not the relative size or quality of these two classes that constitutes the distinction in question, but the direction given to the utility by economics and sociology respectively. In short, economics, as so many economists have insisted, concerns itself with the creation of wealth irrespective of who shall receive this wealth, though this is properly assumed to be those who create it. It narrows down, therefore, to the question of *earnings* and *profits*. It deals with wages, salaries, dividends, receipts and expenditures as related to each

other, and marginal values. The class considered is the earner in the widest sense of the term. It is the makers, those who increase the value, and the sellers or disposers of goods, with whom economics has to do. The primary question in each case is: Is the business a success? If it is not, it must go down. The buyer, the user, the enjoyer, the consumer, is left out of the account. "Political economy . . . has nothing to do with the consumption of wealth, further than as the consideration of it is inseparable from that of production, or from that of distribution."[1] In sharp contrast to this, sociology is exclusively concerned with the *destination* of wealth, in so far as it deals with wealth. It is no more interested in the benefit that the producer receives than in that which it confers on any other class. If a business, no matter how "successful," is injurious, it is a *failure* from the standpoint of sociology. And in broader national affairs it is not a question whether a policy is or is not a source of revenue to the state, but whether it is a benefit to the public. Thus in the question of taxation, of whatever kind, sociology is not concerned with its "fiscal" effects, but with its "social" effects. A tariff, if defended, is so not because it proves a successful and easy way to raise revenue, but because it diversifies and elevates population.[2]

[1] John Stuart Mill, *Essays on Some Unsettled Questions of Political Economy*, London, 1844, p. 132, footnote.

[2] I once made a study of this question which appeared under

It is true that certain modern economists have insisted more or less that consumption should be regarded as a legitimate subject of economic study. I gave a brief history of this movement in economic thought in a former paper,[1] treating it as an advance in economics which I called "social economics." That paper was specially addressed to economists, and no attempt was made to harmonize it with the present work, which, however, was at that time for the most part written, and began to appear a month later. It is only necessary to say now that social economics as thus defined is simply sociology, and those economists who proceed from the standpoint of consumption, whether they realize it or not, whether they desire it or not, are in so far sociologists.

One or two examples of the two distinct points of view of economics and sociology will make them clearer. Prior to the year 1881, in the capacity of librarian of the United States Bureau of Statistics, I had occasion to study the statistics of railroads of various countries. Many foreign countries had commenced the assumption of their control by the state as their charters expired, and already a large number of important lines in France, Italy, Austria, Ger-

the title: "The Sociological Position of Protection and Free Trade," *American Anthropologist*, Washington, Vol. II., No. 4, October, 1889, pp. 289–299.

[1] *Political Science Quarterly*, Vol. X., No. 2, June, 1895, pp. 215–217.

many, and other countries on the continent had passed out of corporate management and were administered by the state either as owner or for the companies. The agitation of state ownership had begun both in Great Britain and in the United States. The railroad journals were filled with the discussion of this question, and I had it as a part of my official duty to keep abreast of the movement and to compile statistics bearing upon it. The tone of the railroad press was of course uniformly hostile to the movement, and I observed that all the arguments were directed to showing that the companies "managed" the lines with greater economy than the state "administered" them. I was required to prepare tables demonstrating this, which was an easy matter, and there really was no room for a difference of opinion. As a pastime I had devoted considerable of my unofficial time for the preceding fifteen years to writing and rewriting my *Dynamic Sociology*, which was then nearly ready for publication, and I could not avoid occasionally taking the sociological point of view as distinguished from the economic one, alone taken by the railroad press, and I took home some of the elaborate Prussian statistical reports (*Statistische Nachrichten von den preussischen Eisenbahnen*), usually several years behind date, and searched carefully through their complicated columns for all possible facts bearing on the sociological side. The year 1874 was well adapted to this, the state management having then extended to about as large

a number of lines as were still in the hands of the companies. I selected the columns for freight and passenger rates, happily given, and wanting in the statistics of nearly or quite all other countries. I worked these up for that year and gave the result in a footnote to page 581 of the second volume of my book. The general result, as there shown, was that "while the roads owned and worked by companies yielded 13.7 per cent greater profits than those owned and worked by the state, the latter carried passengers 9.4 and freight 15 per cent cheaper than the former."

One other example will be merely referred to, because its elaboration would occupy too much space. The Bulletin of the Department of Labor, No. 7, for November, 1896, contains a most important study by Ethelbert Stewart on "Rates of Wages paid under Public and Private Contract." The title, however, is misleading, because in addition to rates paid under contract it includes those paid by municipalities themselves. It is a comparison of these, where they exist, with those paid by contractors, whether public or private, that furnishes interesting matter for the sociologist. A glance at the tables given for Baltimore, Boston, New York, and Philadelphia is sufficient to show that in nearly all the leading industries the municipalities pay higher wages than either contractors or private companies. These and similar investigations are being conducted by the Bureau of Labor and by the Census. In scarcely

any other way could they be made, since private enterprise has no incentive to conduct strictly sociological investigations such as this one preëminently is. They can afford to study only the economic side to ascertain whether any enterprise is profitable to its managers. Public considerations are wholly foreign to their interests. But the state, as already remarked, is essentially benevolent, and all its operations, however shortsighted and fruitless, aim at least to benefit the people. In the hands of wise and humane officers, such as the present head of these great bureaus, they are certain to be productive of immense public good.

It was the great Descartes who first enunciated the truth that all questions of quality are reducible to those of quantity. This mathematical axiom finds its economic expression in the corresponding truth that all questions of principle are at bottom questions of interest. The object of all science is to create art which will assist nature in furthering progress. Art has its highest expression in machinery. Art and machinery belong to economics because they are economical. They consist in the enlistment of the forces of nature in man's service. The physical forces have already been so enlisted until the power of production has become next to unlimited. This has brought about a state of things in which there is a constant tendency to what is called "over-production." What is meant is the production of more than can, in the present state of

society, be consumed. But the inability to consume is not due to incapacity for consumption itself, except in a few articles. It is due to the inability to *obtain*. The fact that there are thousands in want even of the necessaries of life that are thus overproduced shows clearly enough that there is no more produced than would be eagerly consumed if it could be obtained. The problem of the age is to put what is produced into the hands of those who desire to consume it, and to do this in harmony with economic laws, and not as a gift or charity, which violates economic laws.

While no one is wise enough at the present day to formulate a plan for securing this result, the general principle underlying the problem may even now be stated. It is this: The progress made in economic art and machinery is far in advance of that made in social art and machinery. Production is essentially an individual enterprise and comparatively simple, while distribution, not in the economic but in the sociological sense, is highly complex.

Production is the result of individual ingenuity applied to the physical and vital forces of nature. Distribution must be the result of collective ingenuity applied to the social forces. There are physical forces that will secure it to a certain extent, but they are subject to the law of competition, which sets a limit to their action and soon chokes up the avenues of distribution. The kind of ingenuity needed to secure free circulation of products is so-

cial ingenuity, *i.e.*, *collective telesis*. A social machinery of free distribution must be invented and perfected by social ingenuity. The machinery of production is a product of physical science. The machinery of distribution will be a product of social science. Sociology stands in the same relation to the distribution of wealth that economics stands to its production. Most of the so-called over-production is simply the choking of the avenues of distribution. It is the problem of social science to clear these avenues and let the products flow freely wherever they are attracted by human wants. The sociologist believes this possible through social ingenuity and social machinery.

This general social art, the scientific control of the social forces by the collective mind of society for its advantage, in strict homology with the practical arts of the industrial world, is what I have hitherto given the name *Sociocracy*. It has sometimes been confounded with *socialism*, and I cannot perhaps better conclude this work than by briefly pointing out wherein, so far as I understand what socialism is, this differs from it, and also from the prevailing competitive régime or individualism. This can only be done at this stage by a few antithetical propositions whose elaboration is for the present postponed:

1. Individualism has created artificial inequalities.

2. Socialism seeks to create artificial equalities.

3. Sociocracy recognizes natural inequalities and aims to abolish artificial inequalities.

4. Individualism confers benefits on those only who have the ability to obtain them, by superior power, cunning, intelligence, or the accident of position.

5. Socialism would confer the same benefits on all alike, and aims to secure equality of fruition.

6. Sociocracy would confer benefits in strict proportion to merit, but insists upon *equality of opportunity* as the only means of determining the degree of merit.

A cycle is thus completed. Sociocracy is a return to nature from which society has departed. Individualism was the original and natural method recognizing natural inequalities and apportioning benefits according to natural ability. Individual telesis has completely abolished this method. Socialism recognizes this, and would remedy it by an equally wide departure from the natural. Collective telesis can alone remove the artificial barriers raised by individual telesis and place society once more in the free current of natural law.

INDEX

Absolute ethics, 169
Acalephæ, 53
Activity as a factor in social progress, 114
Adaptation, Imperfection of, 250
Administrative nihilism, 58
Æsthetic sentiments, 80
Affections, The, 95
Affective faculties, 96, 109, 110, 143, 165, 175
Alchemy, 140
Alconomy, 140
Alembert, D', 5
Altruism, 4, 103
Amoral action, 185
Ampère, 5
Analogies, Sociological, 56, 60, 93
Anethical action, 185
Animals as cosmic products, 239
Anthropocentric theory, 24
Anthropological Society of Washington, 64
Anthropology, Relation of, to sociology, xi, 64, 123
—, Classification of, 64
Anthropomorphism, 131
Anthropo-teleology, 215
Anticipation, 86, 157
Anti-social qualities, 91
Apes, to what extent gregarious, 90
Appetite, Intellectual, 106
— as a social factor, 144, 152
Applied sociology, 203
Archæology, 123, 136
Aristotle, 34
Art a strictly human attribute, 82, 85
—exclusively telic, 85, 185, 186, 265
Art a condition to the existence of society, 112, 256
—, Origin and development of, 132
—, The social, 271
Artificial equalities and inequalities, 292, 293
Association, Animal, 89, 90, 92
—, Human, 91, 92, 127, 266
Astronomical economics, 201
Astronomy, 8, 139, 140
Athanæus, 181
Attractive legislation, 189, 273

Baronomy, 139, 140
Beauty, Sense of, 80
Bentham, Jeremy, 206
Besonnenheit, 87, 88
Betterment, Social, 204–206
Biologic economics, 254
Biology, Relation of, to sociology, xi, 43
—, First use of the word, 4
—, Transcendental, 8
—, Dynamic, 168
Bionomy, 139
Blumenbach, 209
Brain development, 67–71
— as an emotional center, 104, 105
—, The social, 56, 187, 268

Carlyle, Thomas, 201
Carpenter, William B., 78, 87
Causes, The three kinds of, 239
—, Final, 239–245
Chemical elements as cosmic products, 239
Chemistry, Etymology of the word, 140
Church, Function of the, 173

Civilization wholly artificial, 85, 185
— defined, 186, 261
Classification of the sciences, 5, 19, 139
—, Synoptical, 10
— in sociology necessary, 117, 118
Clothing, Origin of, 253
Collective telesis, xii, 181, 186, 190, 191, 195, 196, 262–293
— telics, 190
Competition, 257, 258
Comte, Auguste, 3, 4, 5, 6, 7, 8, 9, 12, 13, 18, 19, 49, 73, 168, 192, 252
Conation, Direct and indirect method of, 236, 270, 271
Conservation of energy, 211
Constants of nature, 39
Constituencies, Enlightenment of, 280, 281
Consumption the standpoint of sociology, 287
Contract, Régime of, 134
Copernicus, 208
Cosmical crises, 40
Cosmology, Relation of sociology to, xi, 21
Creation *vs.* genesis, 214
Creative genius, 113
Cromwell, 267
Crying, 74
Cudworth, 181
Cunning, 112, 184, 247
Cunningham, William, 202, 203, 206

Darwin, Charles, 76, 87, 143, 201
Data of sociology, xi, 116
Deception, Principle of, 112, 183, 247
De Foe, 255
Deliberative assemblies, 278
Democracy, 277–281
Demography, 136
Descartes, 167, 290
Descriptive sociology, 135
Desire a true natural force, 109, 144, 166
— presupposes memory, 153, 241
Desire, Synonyms of, 167
Differential attributes, 239
Diplomacy, 112, 184
Directive agent, 109
Discovery of truth as a source of pleasure, 106
Distribution, Social *vs.* economic, 291
Doing good, 102, 103
Dynamic agent, 109, 167, 168, 175
—, Two senses of the word, 167, 168, 192
— biology, 168
— economics, 168
— geology, 168
— sociology, 168, 195, 216, 218
— —, Active or positive *vs.* passive or negative, 217, 235
Dynamics of mind, 211

Earth, Man's relations to the, 32
Economics, how distinguished from sociology, 13, 14, 284–290
— a special social science, 136
—, Dynamic, 168
—, Astronomical, 201
—, Biologic, 254
Economy, Pain and pleasure, 206
Effort as a social factor, 114, 115
Emotions, The, 95
—, Pleasures of the, 102
Empiricism, 266
Energy, Storage of, 41, 79, 146, 171, 238–246
—, Mechanical expression for, 140, 141
—, Conservation of, 211
Ennui, 103
Environment, Knowledge of the, 122
— transforms the animal but is transformed by man, 255
Equality, Artificial, 292, 293
— of opportunity, 293
Ether as a cosmic product, 239
Etheronomy, 139, 140
Ethics, Absolute, 169
Ethnography, 123, 136
Ethnology, 123, 136

Evolution, The cosmic object of, 115
—, Social, 180, 206, 233, 282, 283
—, Law of, 210, 232, 233
—, Products of, 239
—, Steps in, 282, 283
Evolutionary teleology, 44
Exogamy, 129
Extra-normal products of evolution, 222

Faith, Scientific, 141, 150
Feeling *vs.* thought, 95, 164
— — function, 98, 114, 156, 177, 218, 219
— the object of the organism, 115
— as a cosmic property, 239
Ferrarese, L., 181, 182
Fetishism, 133
Final causes, Nature of, 239–246
Firmament, why so called, 22
Flint, Robert, viii
Force, Mechanical expression for, 140, 141
—, Every true science a domain of, 163
Forces, Social, xii, 139, 142, 190, 274–276
—, —, Classification of the, 147–149
—, —, Physical and spiritual, 149
— of individual preservation, 148, 149
— — race continuance, 148, 154
— — — elevation, 148, 155
Fortuity of the universe, 37, 39
French mind, Qualities of the, 9
Function *vs.* feeling, 98, 114, 156, 177, 218, 219
— the object of nature, 114, 115
—, Nature of, 172–174

Galileo, 208
Galton, Francis, 186
Genesis, 179, 180, 213, 220, 221
—, Social, 190, 191, 213, 234
— *vs.* creation, 214
Genetic progress, 179, 223
— method, 216
Genetics, 180
Genetics, Social, 190
Genius, 113
Geological record, Imperfection of the, 34
Geology, Dynamic, 168
Good, Nature of the, 97, 100, 158
Government, 56, 129, 187, 188, 228–232, 264, 266–268
—, Society without, 228, 229
—, Natural origin of, 232
Gravitation and radiation, 46
Gray, Asa, 44, 45
Gregariousness, 90

Hamilton, Sir William, 236
Happiness, 115, 206
Hegel, 5, 49
Helmholtz, 44
Hierarchy of the sciences, 19, 139
— — — —, Pedagogic principle of the, 119, 120, 121
Histoire-bataille, 123
Historical school, 132
History, Relative brevity of human, 33
— as a special social science, 123, 125, 126, 136
Hobbes, 5, 49, 224
Holophrastic languages, 85
Homologies *vs.* analogies, 60, 93
Hugo, Victor, 9
Human attributes, Distinctively, 71–89
Huntington, A. J., 181
Hutton, James, 209
Huxley, Thomas Henry, 4, 33, 46, 58, 60, 61, 82
Hypotheses, 39

Idealics, 204
Immortality, Doctrine of, 28
Indifferent *vs.* intensive sensation, 165
Indirection, Intellectual, 183, 244
—, Moral, 184
—, Physical, 185
Individual telesis, xii, 181, 182, 190, 191, 234, 270, 293
— telics, 190

Individualism, 259, 292, 293
Inequalities, Artificial, 292, 293
Ingenuity, 112, 185, 260
—, Governmental, 277
—, Individual *vs.* collective or social, 291, 292
Inorganic compounds as cosmic products, 239
Instinct, 110
Institutions, 123, 128, 170
Intellect a guide to feeling, 97, 109
—, Pleasures of the, 104
—, Substitutes for, 110
—, Function of the, 179
—, The social, 187
— as a cosmic property, 239, 243
— an accident, 248
Intellectual forces, 148, 149
— indirection, 183, 244
Intensive *vs.* indifferent sensations, 165
Interest, All questions of principle reducible to those of, 290
Intuition, 111
Intuitive reason and judgment, 111
Invention, 112, 185, 265
—, Governmental, 271
—, Sociological, 272

Kant, Immanuel, 76, 150, 169
Kepler, 215
Kidd, Benjamin, 28, 131, 186
Kinetic *vs.* dynamic phenomena, 168, 192
Knowledge of the environment, 122

Labor, True meaning of, 256
Laissez faire, 59, 237
Lamarck, Jean, 4, 9
Landseer, 81
Language, 84
Laughing, 73
LeConte, Joseph, 79
Legislation as invention, 188, 271
—, Attractive, 189, 273
—, Scientific, 277–279
Life, Duration of the period of, on the earth, 44
Life, Increasing valuation of, 157
— as a cosmic property, 239
Locke, John, 5
Love as a principle, 155
Lyell, Sir Charles, 209

Machinery, 132, 255
—, Social, 211, 292
Machines, 171, 255
Magic, Origin of, 23
Maine, Sir Henry Sumner, 134
Mallery, Garrick, 64
Malthus, 202, 224
Malthusian principle, 201
Man, Late development of, 32
—, Systematic place of, 67
—, Physical development of, 69
—, attributes distinguishing him from animals, 71–89
—, happiness his object or end, 115, 218
—, The study of, 122, 199
— as a cosmic product, 239
Marriage, 128
Martyrdom, 157
Mason, Otis T., 65
Mass as a mechanical unit, 140, 141
Mechanical units, 140, 141
Mechanics of society, xii, 160, 211
Mechanisms, 170, 171, 172
Meliorism, 26, 204, 205
Metaphysics, 134
Metazoa, 61
Mill, John Stuart, 12, 13
Mind, Biologic origin of, 96, 143, 166
—, Affective side of, 96, 109, 110, 143, 165, 175
—, Perceptive side of, 96, 110, 111, 165
—, Dynamics of, 211
—, Law of, 247
Misarchists, 187, 228
Momentum, Mechanical formula for, 140, 141
Monopoly, 225
Monotheism, 133
Montesquieu, 224
Moral sense, 76
— progress, 108

Moral indirection, 184
Morals, Pure, 169
More, Dr. Henry, 160
Motive *vs.* purpose, 241
Mythology, 131

Natural history, 126
— — method, 200
— selection, 226
— — does not secure the survival of the fittest, 258
Nature, Object of, 45, 114, 115, 218
—, Law of, 247, 254
Necessity *vs.* utility, 108, 156
Neo-Darwinism, 111
Neo-Lamarckism, 113
Newtonian laws of motion, 142, 166
Nisus of nature, 145, 167
Non-advantageous faculties, 113
Nostoceæ, 53, 57

Objective psychology, 96
Oken, 5
Ontology, 134
Opinion, Settlement of, 204, 205
Opportunity, Equality of, 293
Optimism, 23, 25, 26
Order, Social, 171, 190
Organic compounds as cosmic products, 239
Organism, Object of the, 115
Organization, 46
Orientalism, 29
Ornamentation, 81
Over-production, 290

Pain economy, 206
Paley, 76
Parable of St. Simon, 228
Paradoxes of nature, 22
Passions, The, 95
Patten, Simon N., 168, 206
Perception of relations, 111, 243, 265
Perceptive faculties, 96, 110, 111, 165
Pessimism, 24, 26, 35
Philology, 64
Philosophy, Social, vii, viii, xi, 1
Philosophy, Modern *vs.* ancient, 116
—, Primitive, 130, 131
Physical indirection, 185
Physiocracy, 224
Place of sociology among the sciences, xi, 3
Planets, Habitability of the, 31
Plants as cosmic products, 239
Plastic, Survival of the, 257
Plato, 49, 181
Platonic ideas, 11
Pleasure, Origin of, 98, 152
—, Philosophy of, 100–103
— economy, 206
Pleasures, Scale of, 101, 108, 158
—, Intellectual, 104
Political economy, how distinguished from sociology, 13, 14, 284–290
Politics, Speculative, 12
—, The science of, 12
Polyandry, 128
Polytheism, 133
Pope, Alexander, 199
Positivity, 7
Powell, J. W., 64
Power, Mechanical expression for, 140, 141
Preservative forces, 148
Principle, All questions of, reducible to those of interest, 290
Production, True meaning of, 256, 291
Progress, Social, 33, 179, 190, 265
—, Moral, 108
—, Genetic, 179, 223
—, Telic, 179, 180
—, Active or positive *vs.* passive or negative, 217, 235
Properties, Cosmic, 239
Protection and free trade, 287
Protestant reformation, 30
Protococci, 53, 57
Protoplasm the physical basis of life, 46
— as a cosmic product, 239, 240
Protozoa, 61
Prussian railroads, 287–289
Psychics, 145

Psychologic basis of sociology, 236, 237, 259
Psychology, Relation of sociology to, xi, 94
— a department of anthropology, 64
—, Subjective *vs.* objective, 96, 109, 110
Psychonomy, 139, 140
Pure sociology, 169
— morals, 169
Purpose of sociology, xii, 191, 207
— distinguished from motive, 241

Quality, All questions of, reducible to those of quantity, 290
Quatrefages, A. de, 81

Radiation and gravitation, 46
Railroads, Prussian, 287–289
Rationality, 83
Reason, 83, 105
Reflective verbs, Philosophical meaning of, 214, 215
Reformation, The Protestant, 30
Religion, 27, 131
—, Cosmical function of, 173
Reproductive forces, 148
Ricardo, 224
Robinson Crusoe, 255, 256

Sagacity, 112, 184
Saint Simon, Parable of, 228
Schopenhauer, 74, 78, 87, 105, 166
Science, Social, ix, xii, 137
— involves philosophy, viii, 116
—, Purpose of, 197, 207
— consists essentially in knowing, 265
Scientific legislation, 277–279
Self-consciousness, 86
Self-preservation, Law of, 23
Sensation, Intensive *vs.* indifferent, 165
Senses, Pleasures of the, 102
Sexual instinct, 102
Seymour, Thomas D., 181
Shaler, Nathaniel S., 44
Shelter, Origin of, 253
Shrewdness, 112, 184
Small, Albion W., v, 5, 180, 181, 196, 204
Smith, Adam, 202, 224
Sociability, 41, 90
Social betterment, 204–206
— dynamics, 168, 175–190
— economics, 287
— economy, 12
— evolution, 180, 206, 233, 282, 283
— forces, xii, 139, 142, 190, 274–276
— —, Classification of the, 147, 148, 149
— —, Physical, 149
— —, Spiritual, 149
— genesis, xii, 190, 191, 213, 234
— genetics, 190
— intellect, 187
— machinery, 211, 292
— mechanics, 160, 211
— order, 171, 190
— organism, 49–63, 187, 268
— philosophy, vii, viii, xi, 1
— physics, 161
— progress, 33, 179, 190, 265
— science, ix, xii, 137
— sciences, The special, 135
— statics, 168–175, 190, 218
— structures, 170
— telesis, 190
— telics, 190
Socialism, 292, 293
Societary, Use of the word, 5
Society, Effort the object of, 115
— an institution, 128, 170
Sociocracy, 292, 293
Sociology, Place of, among the sciences, xi, 3
—, — — in the curriculum, 136
—, the word, First use of, 3
—, — —, Etymology of, 139
—, how distinguished from political economy, 13, 14, 284–290
—, — it should be taught, 17
— and cosmology, 21
— — biology, 43
— — anthropology, 64, 123
— — psychology, 94
—, Animal, 92

Sociology, Data of, 116
—, Acquaintance with the simpler sciences necessary to, 119
—, Dynamic, 168, 195, 216, 218
—, —, Active or positive, 217, 235
—, —, Passive or negative, 217
—, Pure, 169
—, Purpose of, 191, 207
—, Schools of, 191–195
—, Applied, 203
—, Psychologic basis of, 236, 237, 259
Socionomy, 139, 140
Somatology, 64, 123
Space as a mechanical unit, 140, 141
Speculative genius, 113
Speech, Origin of, 70
Spencer, Herbert, 6, 44, 49, 50, 56, 57, 60, 76, 94, 134, 135, 168, 187, 192, 228, 234, 267
Spinoza, 160
Spiritual forces, 149
Statics, Social, 168–175, 190, 218
Stationary, Fallacy of the, 282, 283
Statistics, 124
Status, Régime of, 134
Stetson, Charlotte Perkins, 283
Storage of energy, 41, 79, 146, 171, 238–246
Strategy, 112, 184
Structures, Social, 170
Subjective psychology, 96, 109, 110
Sun, Elements of the, 31
Survival of the fittest, 226, 258
— — — plastic, 257
Sympathy, 74
Synoptical classification, 10

Tact, 112
Taste, Standards of, 80
Taxation, Fiscal *vs.* social effects of, 286
Technology, 64, 123, 136
Teleology, 181, 236
—, Evolutionary, 45
—, Anthropo- and theo-, 215
Telesis, 180, 181, 213, 250
Telesis, Individual, 181, 182, 190, 191, 234, 270, 293
—, Collective, 181, 186, 190, 191, 195, 196, 262–293
—, Social, 190
Telestics, 181
Telic progress, 179, 180
Telics, 180, 181, 190
—, Individual, collective, social, 190
Thallassicollæ, 53, 57
Theory of units, 140, 141
Theo-teleology, 215
Thibet, 128
Thought, Stages of, 133
—, Basis of, 243
Thucydides, 49
Time as a mechanical unit, 140, 141
Tools, 253, 255
Transcendental biology, 8
Truth, Power of established, 208–211
—, Historical order of the discovery of, 210

Unintended phenomena, 98, 221, 222, 270
Unmoral action, 185
Utility *vs.* necessity, 108, 156
— the standpoint of economics, 284

Velocity, Mechanical expression for, 140, 141
Vigilance committees, 232
Vincent, George E., 182, 196
Volition, 78
Voluntary organization, 266

Wages paid under private and public contract, 289
Wallace, Alfred Russel, 111
Want as a social factor, 167
Weeping, 74
Weismann, August, 98, 111
Werner, 209
Whately, Bishop, 77
Will, 109, 166, 241
Wilson, George G., viii

Printed in the United States of America.